

Colorado

Water Supply Outlook Report

June 1, 2016



A view of Clear Creek headwater drainages on a relatively snowy late May day depict the above average snowpack conditions in the South Platte River basin. A cool and generally wet May helped snowpack stick round a week or two later than normal in some locations. In the center of the picture is Torreys Peak from a vantage point of Mount Sniktau just off the continental divide.

Date: 5/28/2016

Photo By: Brian Domonkos

REMINDER: We are soliciting field work photos from our snow surveyors again this year. Each month we will pick one to grace the cover of this report! Please include information on where, when and of who/what the photo was taken.

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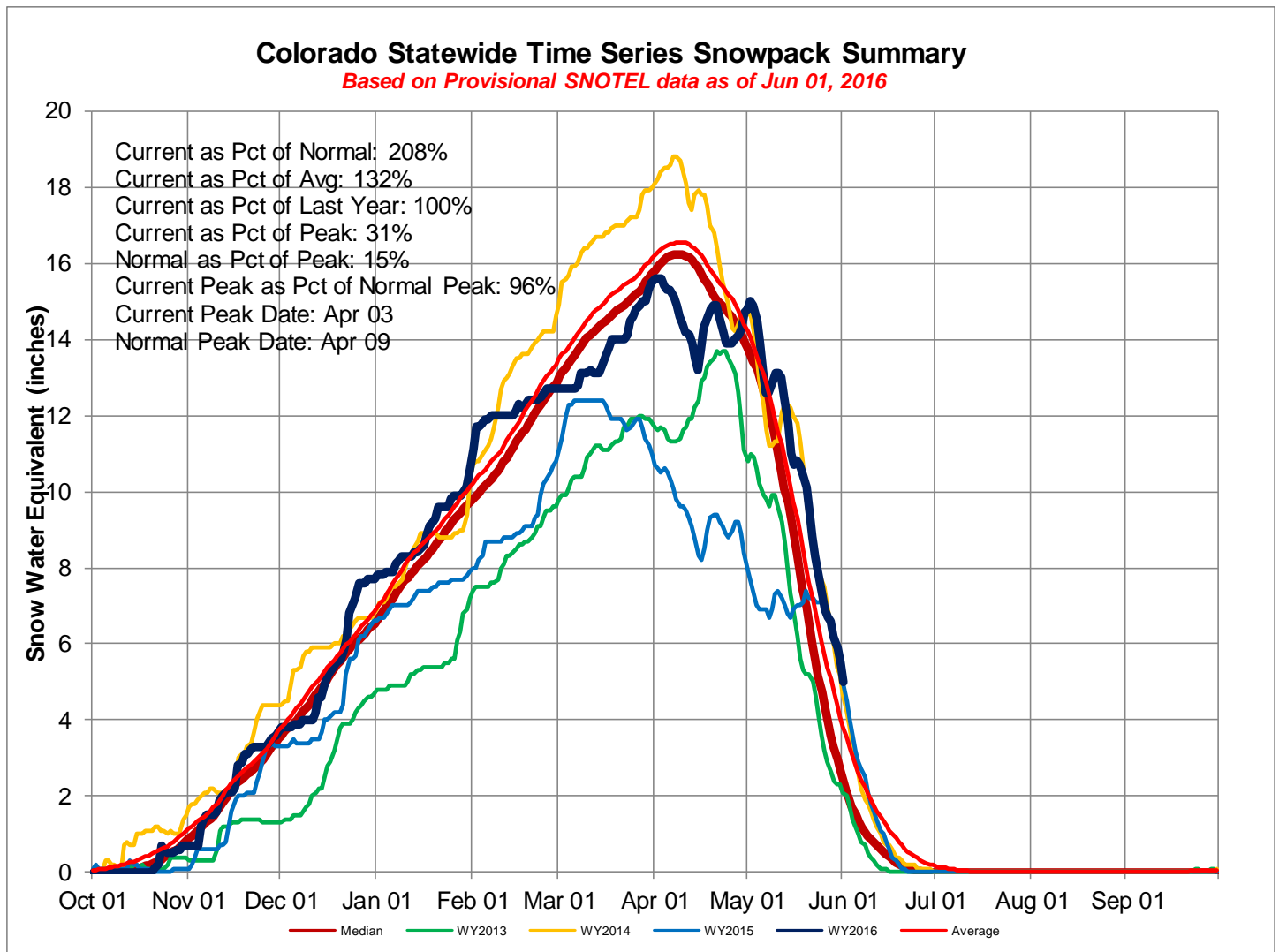
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Statewide Water Supply Conditions

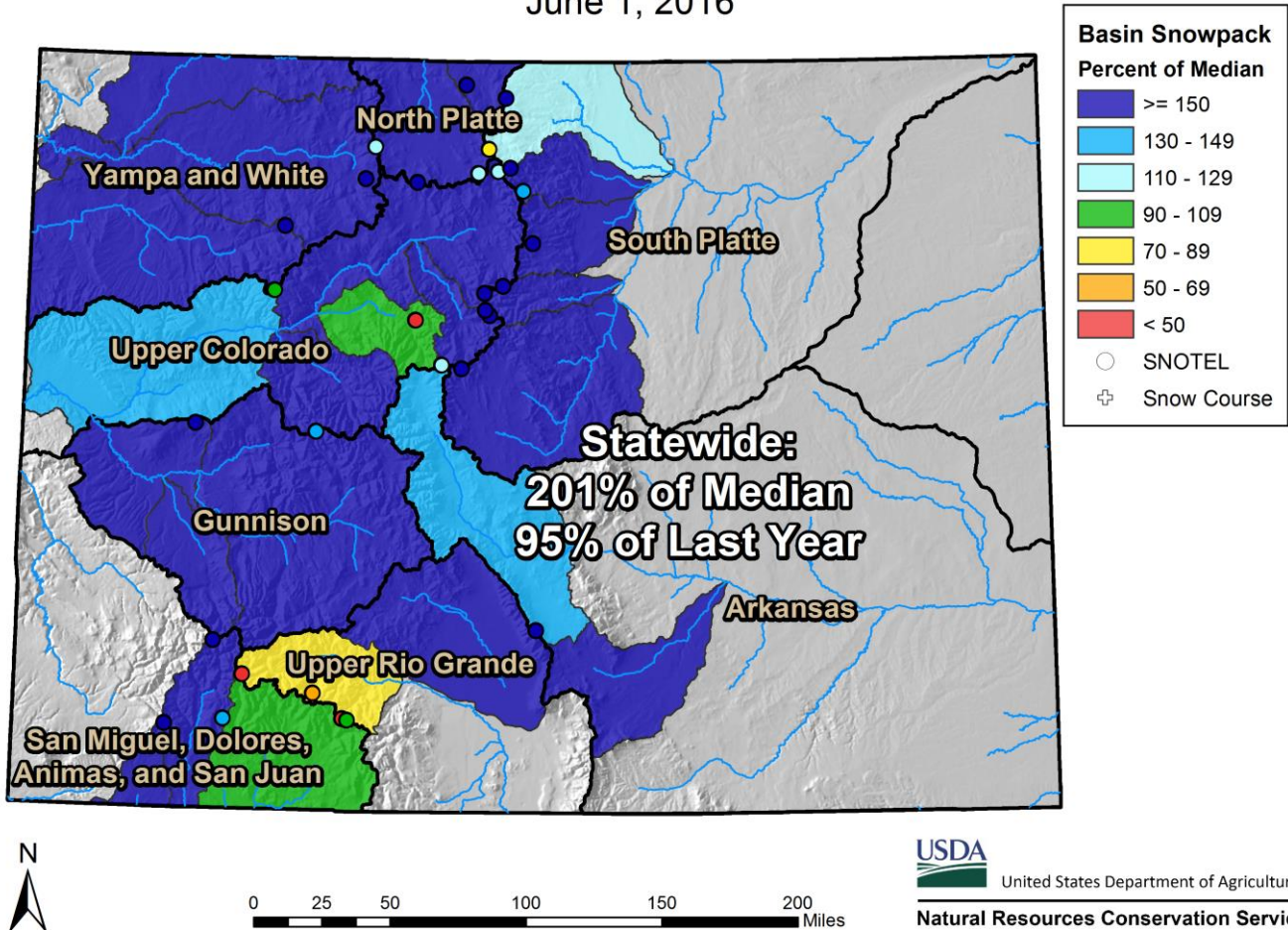
Summary

Snowmelt in the mountains of Colorado is in full swing and now more than half of Colorado's SNOTEL sites no longer retain snow. In April, statewide snowpack had peaked and it appeared runoff was on an early trajectory. Fortunately, premature runoff was slowed in all of Colorado's basins by a cool wet May weather pattern with some considerable snowstorms. This increased snowpack at upper and middle mountain elevations and allowed some watersheds to reach greater snowpack peaks. Later peaks were achieved in basins such as the South Platte and Arkansas. May 2016 precipitation, while only half of last year's accumulation, was integral to the preservation of snowpack of the tributaries that drain the San Juan Mountains. Future streamflow projections do vary across the state. In the Rio Grande and combined San Miguel, Dolores, Animas and San Juan basins forecasts are below average, while conversely, both the North and South Platte basins do have above normal forecasts. At the beginning of June, year to date precipitation, snowpack and reservoir storage are all above normal statewide and have Colorado poised for a positive start to summer runoff.



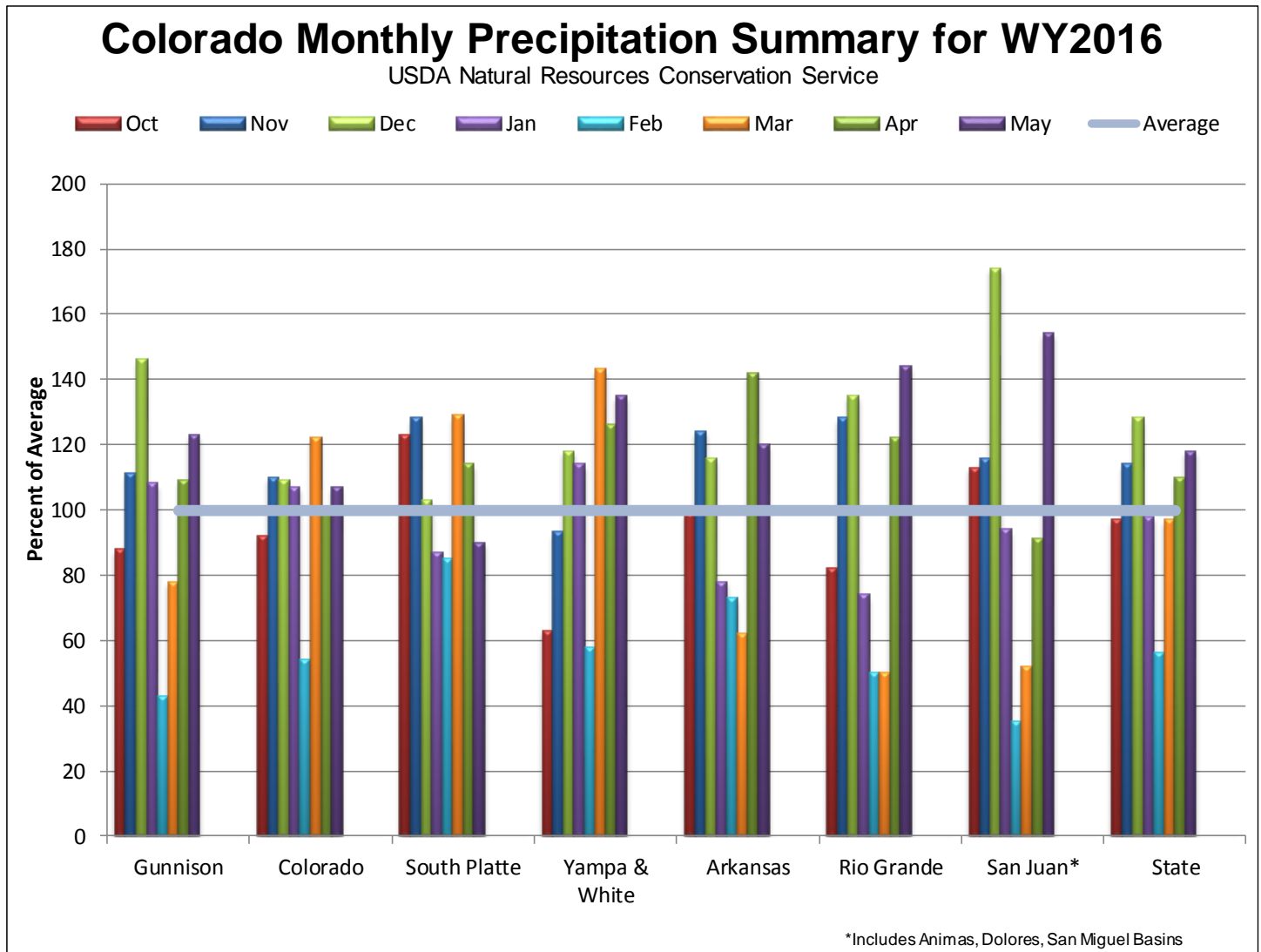
Snowpack

Colorado Monthly Snowpack Summary June 1, 2016



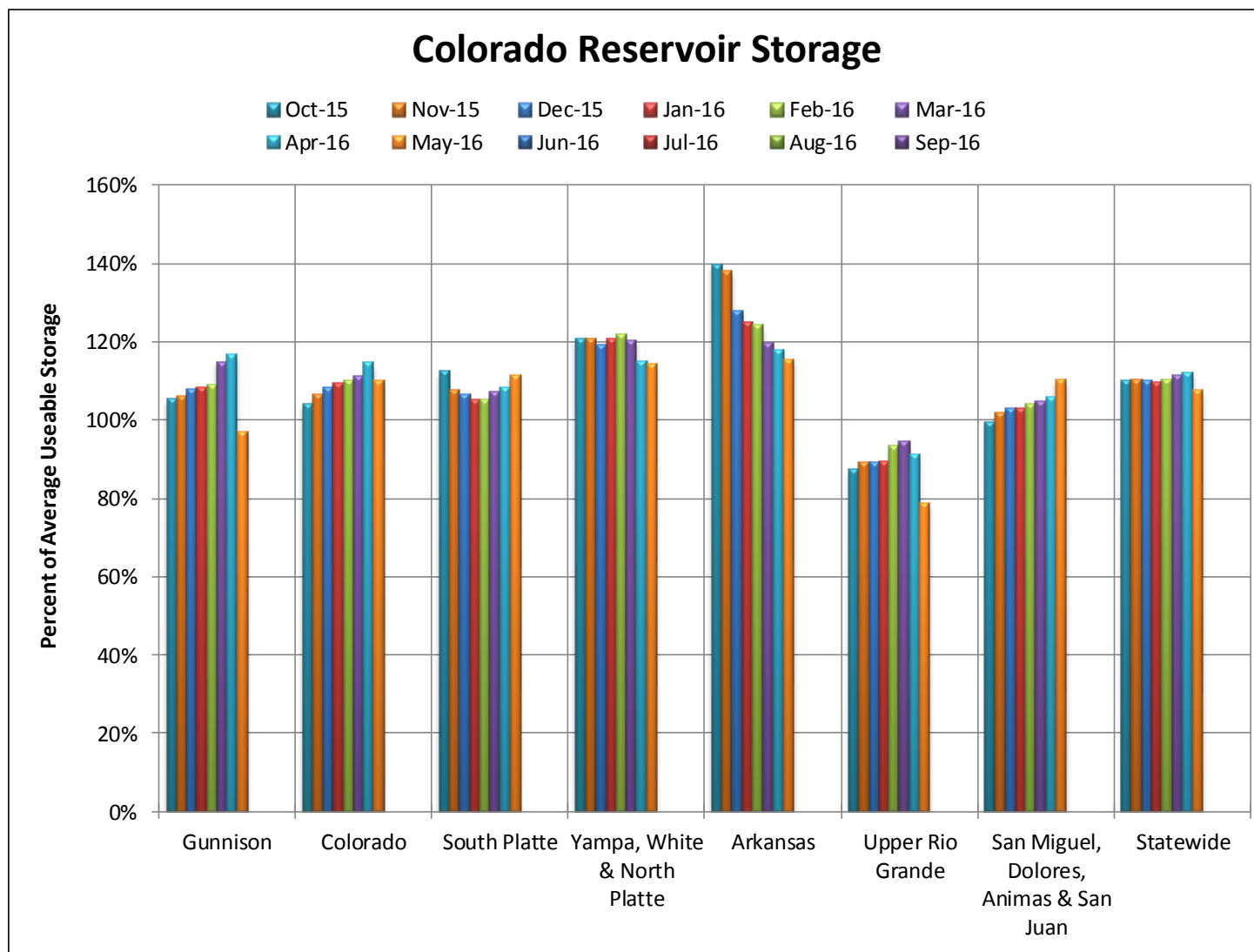
Favorable mountain weather conditions during the first half of May continued to delay snowmelt at many SNOTEL sites. As of June 1st, many high elevation sites, especially along the northern half of the Continental Divide, continue to maintain snowpacks that are greater than half of their total accumulation for the season. All of Colorado's major river basins, except the Rio Grande, have an above normal basin-wide snowpack and the statewide snowpack is 201 percent of the median. Overall snowpack trends for winter 2016 were split between the northern and southern basins. All basins had developed above normal snowpacks by January 1st, which were substantial enough to prevent snowpack amounts from dropping too far below normal during an especially dry February. However, warm temperatures and dry conditions persisted in the southern river basins through March, which decreased the snowpack to below normal levels on April 1st in the Arkansas, Rio Grande, and combined San Miguel, Dolores, Animas, and San Juan River (SMDASJ) basins. Snowy conditions returned in April, boosting normals for the Arkansas and parts of the SMDASJ river basins, but the snowpack continued to deplete for all but the highest elevation SNOTEL sites in the Rio Grande River basin, bringing it to 85 percent of normal on June 1st. Additionally, basin-wide snowfall amounts in the Gunnison, Rio Grande, and SMDASJ failed to reach typical peak snowpack amounts. Alternatively in the northern regions of the state, abundant snowfall fell during March through much of May, which has kept snowpack levels above normal this spring in the South Platte, Colorado, and combined Yampa, White, North Platte River basins. These basins reached peak accumulations above normal and continue to hold the most snow in the state.

Precipitation



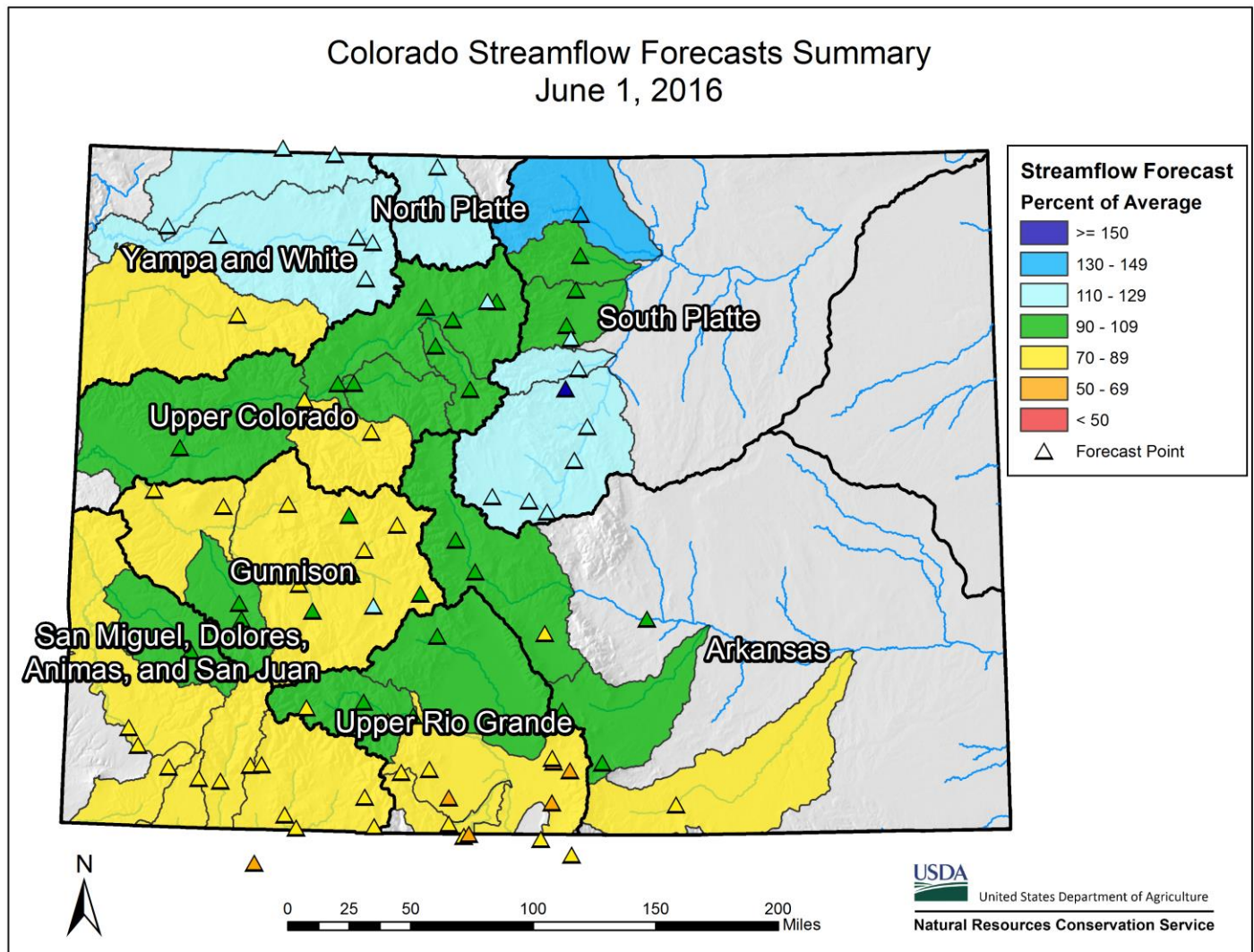
Precipitation amounts varied widely across Colorado throughout the month of May but statewide ended up above normal, at 118 percent of average. Water year to date precipitation is slightly above normal as of June 1st, at 102 percent of average. The mountains of Southwest Colorado received the most May precipitation in the state relative to their normal amounts. The combined San Miguel, Dolores, Animas, and San Juan basins received 154 percent of average May precipitation and the Upper Rio Grande received 144 percent. The next highest precipitation amounts occurred in the Yampa, White, and North Platte basins of Northwest Colorado, which collectively received 135 percent of average May precipitation. The Gunnison and Arkansas basins received similar amounts of precipitation as they did in April, at 123 and 120 percent of average, respectively. The Colorado River basin received 107 percent of average May precipitation and the South Platte was the only basin below normal, at 90 percent. Across the basins water year to date precipitation varies but not widely compared to the most recent monthly values, with all major basins being near normal; ranging between 96 and 108 percent of average since October 1st. It is interesting to note that while May 2016 did have well above average precipitation across much of the state only one group of basins (Yampa, White, and North Platte) received much more than half of the precipitation that was received during the extremely wet May of 2015.

Reservoir Storage



Percent of average statewide reservoir storage dropped slightly from the beginning of May but is still above normal levels, at 108%. The Gunnison and the Upper Rio Grande are the only basins in the state that currently have below average reservoir storage. The Gunnison is only slightly below, at 97 percent, but the Upper Rio Grande was already the lowest in the state and dropped an additional 12 percent from last month and is now at 79 percent of average reservoir storage. On the opposite end of the spectrum, the Arkansas currently has the highest value in the state at 116 percent of average. This is followed closely by the Yampa basin that is currently at full capacity, which is 114 percent of its average for the beginning of June. Reservoirs of the South Platte basin are currently storing 112 percent of average and 92 percent of capacity, even with Antero Reservoir being very low due to construction being done on the dam. The Upper Colorado and combined San Miguel, Dolores, Animas, and San Juan basins are both storing 110 percent of their average volumes for this time of year. There is however a notable difference in their current storage as a percent of capacity, with the basins of Southwest Colorado being at 96 percent of reservoir capacity while reservoirs in the Colorado basin are storing 82 percent of capacity.

Streamflow



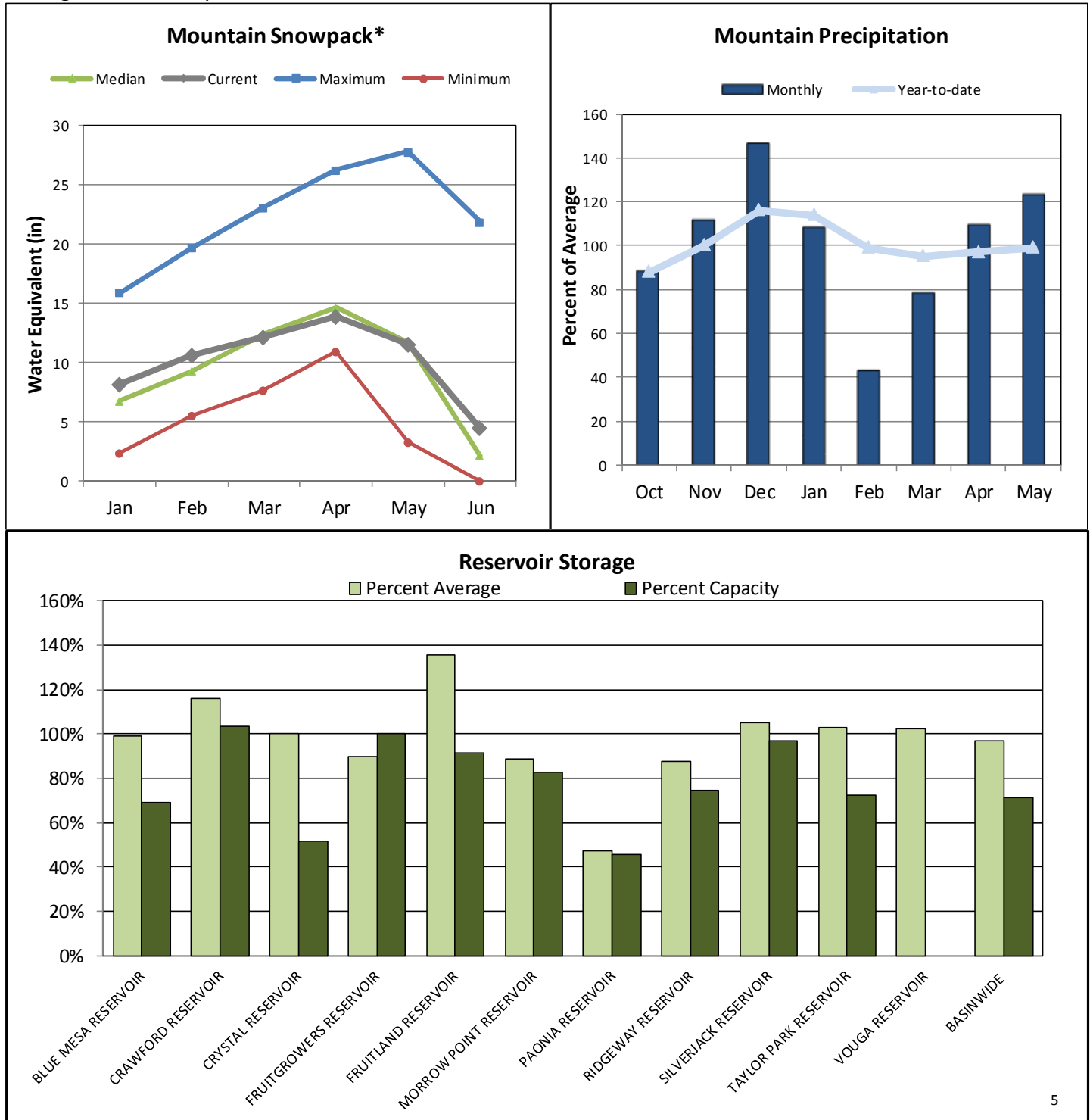
Streamflow forecasts for the remainder of the runoff season continue to follow the same general trend that has persisted this winter since January: streamflows in the northern half of the state have a better outlook than those in the southern portion. Forecasts for the northern streams have largely crept up or stayed the same each month, while forecasts for southern streams have mostly decreased since January. Due to a lingering snowpack and plentiful May precipitation, runoff volumes for streams in the South Platte, combined Yampa, White, and North Platte, and northern tributaries of the Colorado River basin are largely expected to exceed normal flows. Forecasts are highest for tributaries in the South Platte River basin, where all streams are predicted to have flows above normal, and most are expected to be greater than 110 percent above the average. Many streamflows in the Yampa, White, and North Platte basin are also forecast to be greater than 110 percent of average. The lowest streamflows are currently predicted for the Rio Grande and combined San Miguel, Dolores, Animas and San Juan River basins. The above average May precipitation slightly boosted streamflow forecasts for the April – July period, but this was not enough to make up for the lackluster snowpack experienced in much of these basins. There is a range of variability for streams in the southern basins, but most forecasts range from 60 to 85 percent of average. Forecasts for the Gunnison and Arkansas River basins are mostly predicted to be somewhat below normal, in the 75 to 100 percent of average range, with a few outliers exceeding normal runoff volumes.

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GUNNISON RIVER BASIN

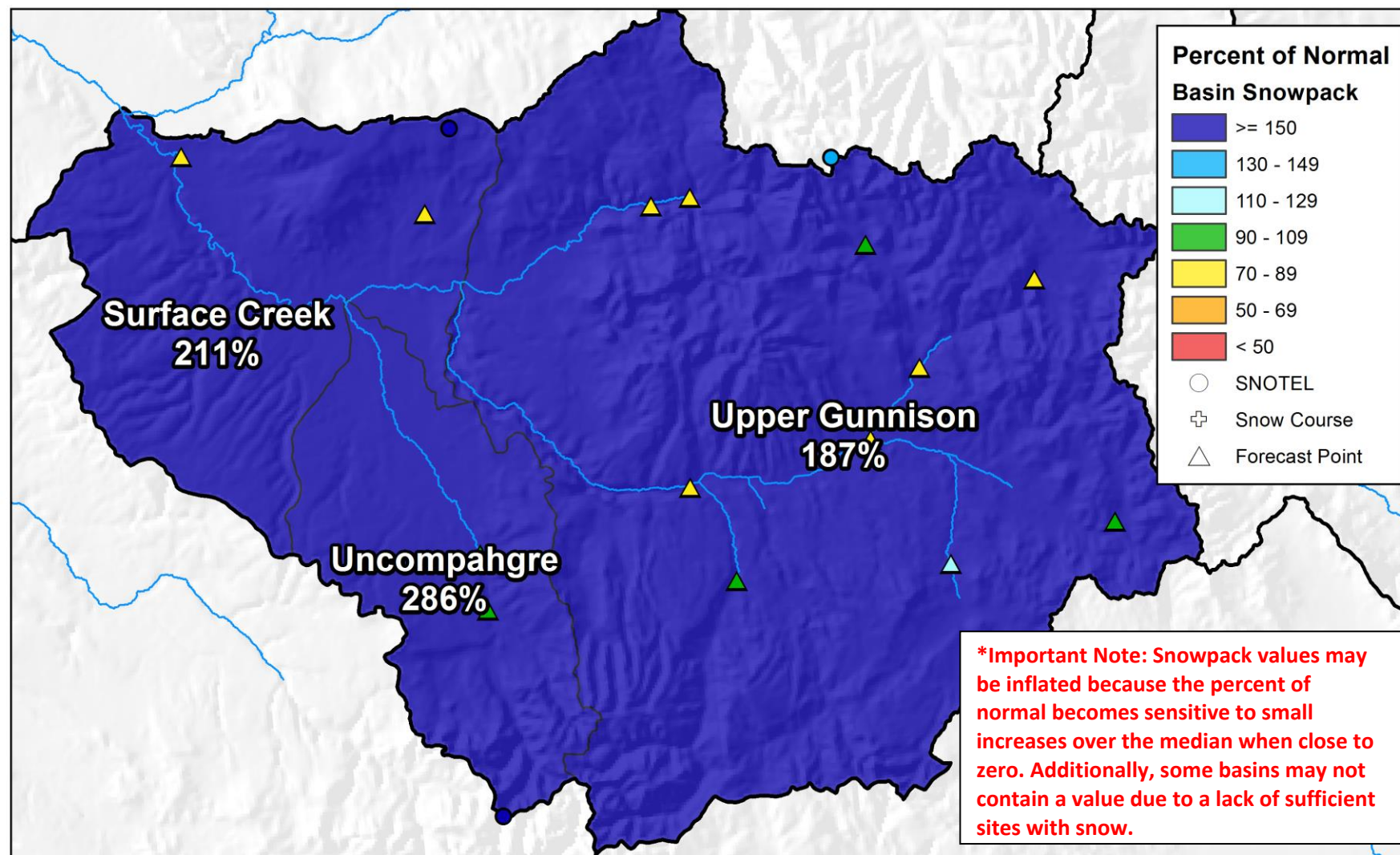
June 1, 2016

Snowpack in the Gunnison River basin is above normal at 209% of the median. Precipitation for May was 123% of average which brings water year-to-date precipitation to 99% of average. Reservoir storage at the end of May was 97% of average compared to 111% last year. Current streamflow forecasts range from 117% of average for Cochetopa Creek below Rock Creek near Parlin to 78% for the inflow to Paonia Reservoir.



Gunnison River Basin Snowpack and Streamflow Forecasts

June 1, 2016



0 5 10 20 30 40 Miles



United States Department of Agriculture
Natural Resources Conservation Service

Gunnison River Basin
Streamflow Forecasts - June 1, 2016

Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

GUNNISON RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Taylor Park Reservoir Inflow	APR-JUL	70	79	85	86%	92	102	99
	JUN-JUL	44	53	59	95%	66	76	62
Slate R nr Crested Butte	APR-JUL	67	72	76	92%	80	87	83
	JUN-JUL	33	38	42	100%	46	53	42
East R at Almont	APR-JUL	147	156	163	90%	170	181	182
	JUN-JUL	89	98	105	99%	112	123	106
Gunnison R near Gunnison ²	APR-JUL	260	295	315	85%	340	375	370
	JUN-JUL	157	188	210	98%	235	270	215
Tomichi Ck at Sargents	APR-JUL	27	30	32	107%	35	39	30
	JUN-JUL	7.3	10.3	12.6	91%	15.2	19.4	13.8
Cochetopa Ck bl Rock Ck nr Parlin	APR-JUL	14.4	16.2	17.6	117%	19.2	22	15
	JUN-JUL	2.8	4.6	6	83%	7.6	10.3	7.2
Tomichi Ck at Gunnison	APR-JUL	58	65	70	95%	76	86	74
	JUN-JUL	18.1	25	30	81%	36	46	37
Lake Fk at Gateview	APR-JUL	94	105	113	92%	122	135	123
	JUN-JUL	61	72	80	99%	89	102	81
Blue Mesa Reservoir Inflow ²	APR-JUL	540	575	600	89%	625	670	675
	JUN-JUL	305	340	365	96%	390	435	380
Paonia Reservoir Inflow	MAR-JUN	29	56	75	78%	94	121	96
	APR-JUL	35	60	76	78%	92	117	97
	JUN	-35	-7.7	11	48%	30	57	23
	JUN-JUL	-24	0.6	17	59%	33	58	29
NF Gunnison R nr Somerset ²	APR-JUL	200	215	230	79%	240	260	290
	JUN-JUL	59	74	85	75%	97	116	114
Surface Ck at Cedaredge	APR-JUL	11.7	12.7	13.5	80%	14.3	15.6	16.8
	JUN-JUL	3.2	4.2	5	66%	5.8	7.1	7.6
Ridgway Reservoir Inflow	APR-JUL	85	93	98	97%	103	112	101
	JUN-JUL	57	65	70	108%	75	84	65
Uncompahgre R at Colona ²	APR-JUL	105	119	130	95%	141	159	137
	JUN-JUL	59	73	84	104%	95	113	81
Gunnison R nr Grand Junction ²	APR-JUL	1140	1200	1240	84%	1280	1350	1480
	JUN-JUL	510	570	610	88%	655	720	695

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

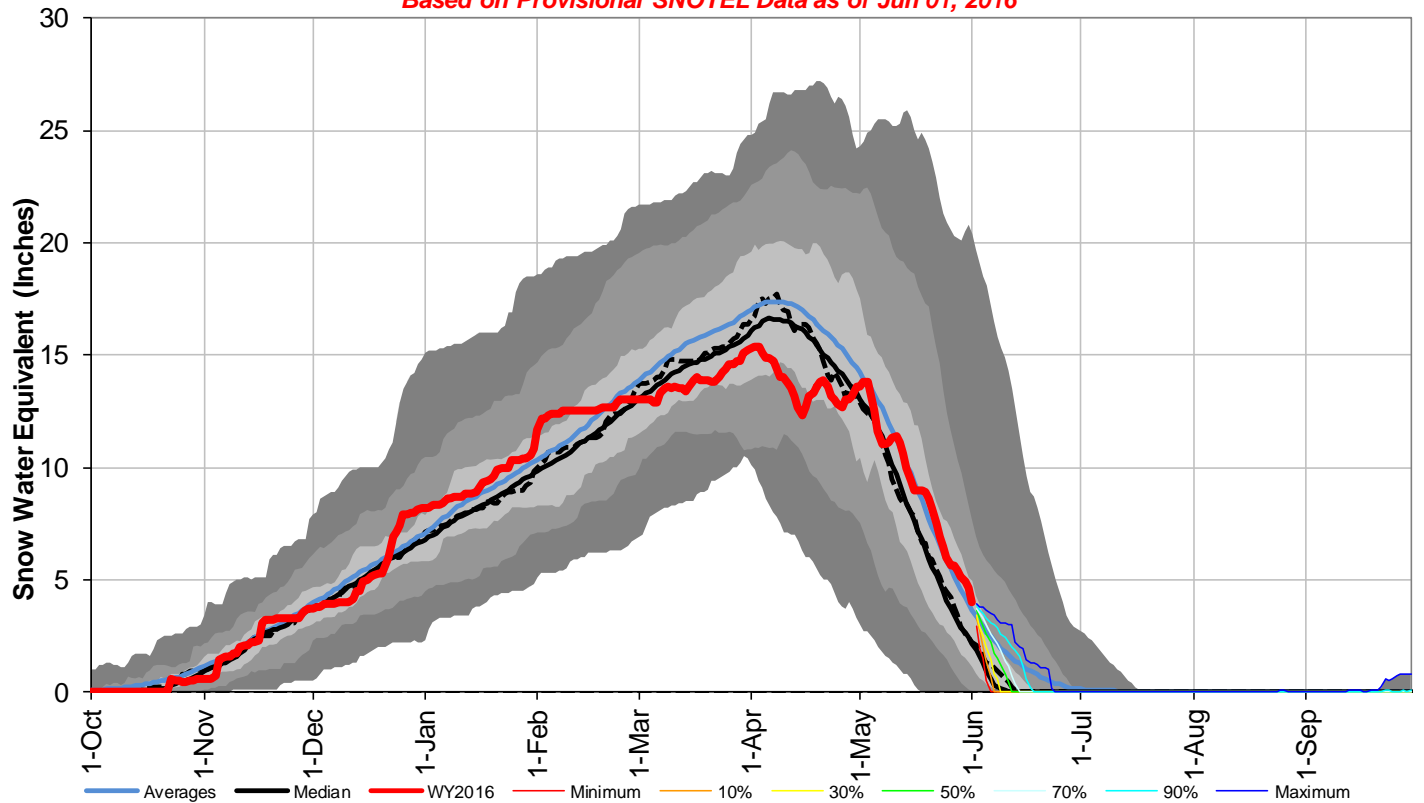
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Blue Mesa Reservoir	571.6	652.8	575.3	830.0
Crawford Reservoir	14.5	14.5	12.5	14.0
Crystal Reservoir	9.0	9.0	9.0	17.5
Fruitgrowers Reservoir	3.6	3.6	4.0	3.6
Fruitland Reservoir	8.4	8.4	6.2	9.2
Morrow Point Reservoir	100.3	111.6	113.2	121.0
Paonia Reservoir	7.0	15.5	14.9	15.4
Ridgway Reservoir	61.8	72.3	70.6	83.0
Silverjack Reservoir	12.4	12.5	11.8	12.8
Taylor Park Reservoir	76.7	90.5	74.7	106.0
Vouga Reservoir	0.9	0.9	0.9	0.9
Basin-wide Total	866.2	991.6	893.1	1213.4
# of reservoirs	11	11	11	11

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
UPPER GUNNISON BASIN	10	187%	198%
SURFACE CREEK BASIN	2	211%	165%
UNCOMPAHGRE BASIN	3	286%	279%
GUNNISON RIVER BASIN	13	209%	216%

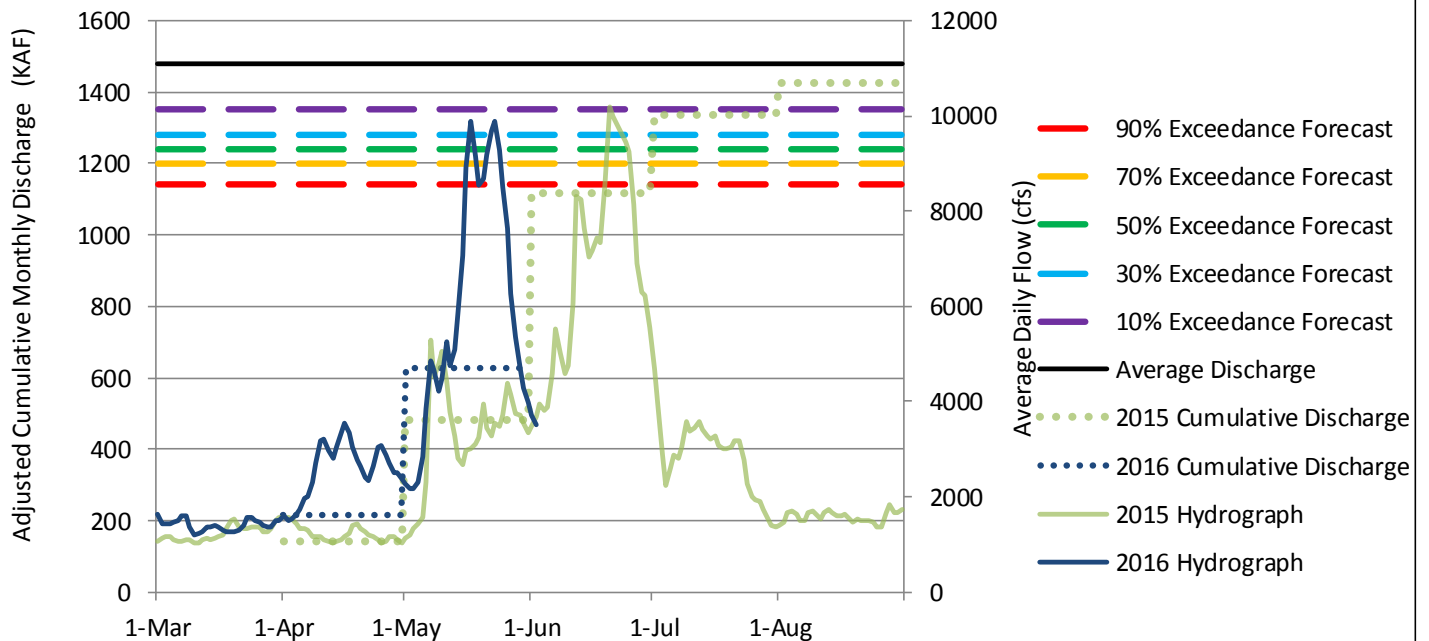
Gunnison River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Gunnison River near Grand Junction, CO

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)



Please refer to the sections at the end of this report for further explanation concerning these graphs.

UPPER COLORADO RIVER BASIN

June 1, 2016

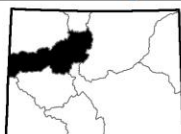
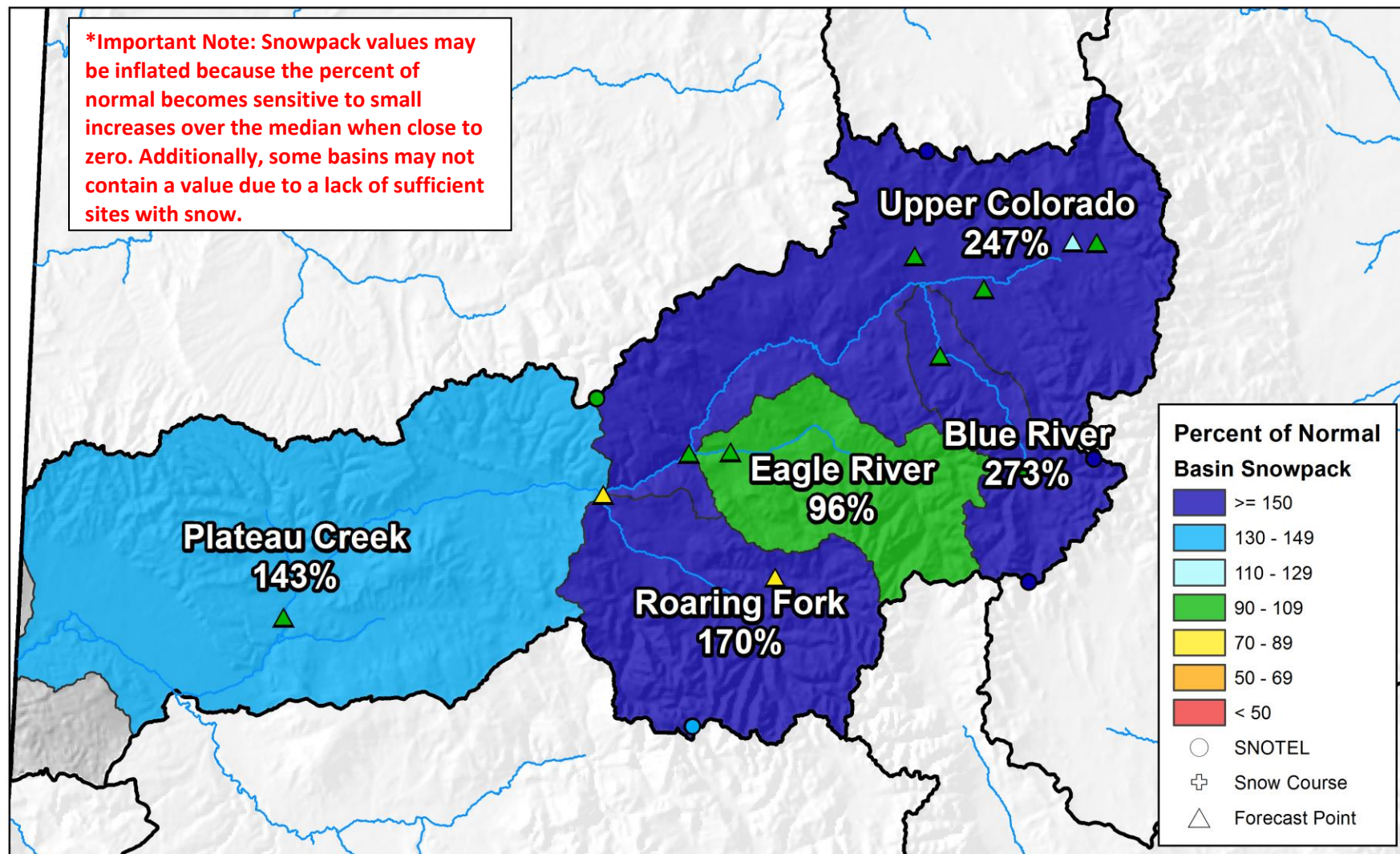
Snowpack in the Colorado River basin is above normal at 204% of the median. Precipitation for May was 107% of average which brings water year-to-date precipitation to 101% of average. Reservoir storage at the end of May was 110% of average compared to 115% last year. Current streamflow forecasts range from 117% of average for the inflow to Willow Creek Reservoir to 83% for the inflow to Ruedi Reservoir.



Upper Colorado River Basin Snowpack and Streamflow Forecasts

June 1, 2016

***Important Note:** Snowpack values may be inflated because the percent of normal becomes sensitive to small increases over the median when close to zero. Additionally, some basins may not contain a value due to a lack of sufficient sites with snow.



0 5 10 20 30 40 Miles



United States Department of Agriculture

Natural Resources Conservation Service

Upper Colorado River Basin Streamflow Forecasts - June 1, 2016

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

UPPER COLORADO RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Lake Granby Inflow ²	APR-JUL	181	197	210	95%	220	240	220
	JUN-JUL	108	124	135	94%	147	165	144
Willow Ck Reservoir Inflow	APR-JUL	49	52	55	117%	58	62	47
	JUN-JUL	15	18.5	21	100%	24	28	21
Williams Fk bl Williams Fk Reservoir ²	APR-JUL	90	97	102	105%	107	116	97
	JUN-JUL	54	61	66	100%	71	80	66
Wolford Mtn Reservoir Inflow	APR-JUL	49	53	56	104%	59	65	54
	JUN-JUL	12.8	16.9	20	109%	23	29	18.4
Dillon Reservoir Inflow ²	APR-JUL	147	160	168	103%	178	192	163
	JUN-JUL	102	115	123	112%	133	147	110
Green Mountain Reservoir Inflow ²	APR-JUL	240	265	280	102%	300	325	275
	JUN-JUL	158	182	200	108%	220	245	185
Eagle R bl Gypsum ²	APR-JUL	260	295	315	94%	340	380	335
	JUN-JUL	157	191	215	102%	240	280	210
Colorado R nr Dotsero ²	APR-JUL	1210	1320	1400	100%	1480	1610	1400
	JUN-JUL	665	770	850	101%	935	1060	840
Ruedi Reservoir Inflow ²	APR-JUL	90	104	115	83%	126	144	139
	JUN-JUL	57	71	82	92%	93	111	89
Roaring Fk at Glenwood Springs ²	APR-JUL	510	550	580	84%	610	655	690
	JUN-JUL	335	375	405	89%	435	480	455
Colorado R nr Cameo ²	APR-JUL	1910	2070	2190	93%	2310	2500	2350
	JUN-JUL	1090	1250	1370	96%	1490	1680	1420

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

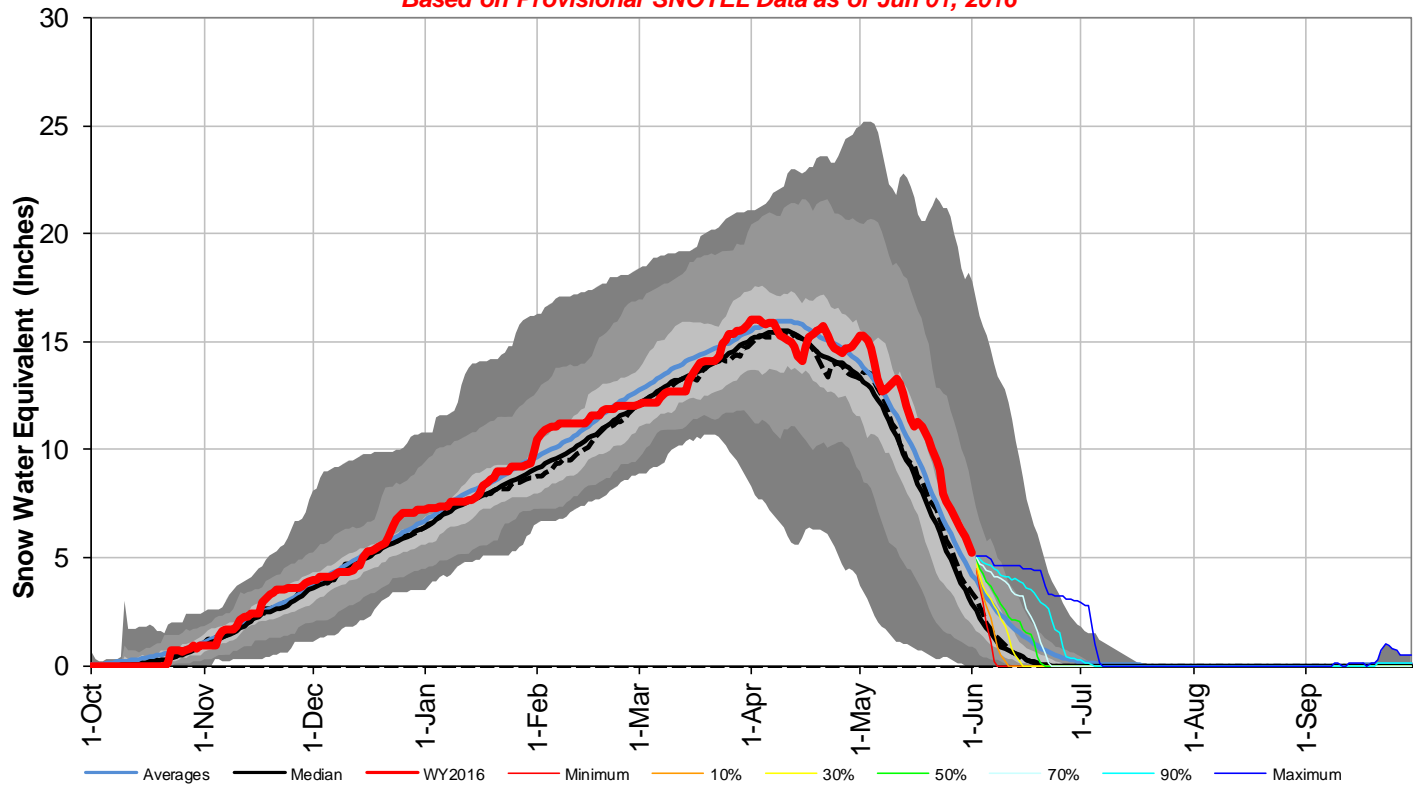
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Dillon Reservoir	235.8	219.8	227.8	249.1
Green Mountain Reservoir	89.2	102.0	84.9	146.8
Homestake Reservoir	38.1	24.9	24.7	43.0
Lake Granby	360.5	431.2	313.6	465.6
Ruedi Reservoir	76.8	84.2	78.0	102.0
Shadow Mountain Reservoir	17.2	17.1	16.9	18.4
Vega Reservoir	33.2	31.2	31.3	32.9
Williams Fork Reservoir	86.1	86.3	73.0	97.0
Willow Creek Reservoir	7.3	6.0	7.9	9.1
Wolford Mountain Reservoir	66.4	52.6	59.9	65.9
Basin-wide Total	1010.5	1055.3	918.0	1229.8
# of reservoirs	10	10	10	10

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
BLUE RIVER BASIN	5	258%	409%
HEADWATERS COLORADO RIVER	19	242%	271%
MUDDY CREEK BASIN	3	374%	208%
EAGLE RIVER BASIN	4	96%	115%
PLATEAU CREEK BASIN	2	211%	165%
ROARING FORK BASIN	7	170%	224%
WILLIAMS FORK BASIN	3	261%	288%
WILLOW CREEK BASIN	2		
UPPER COLORADO RIVER BASIN	28	204%	223%

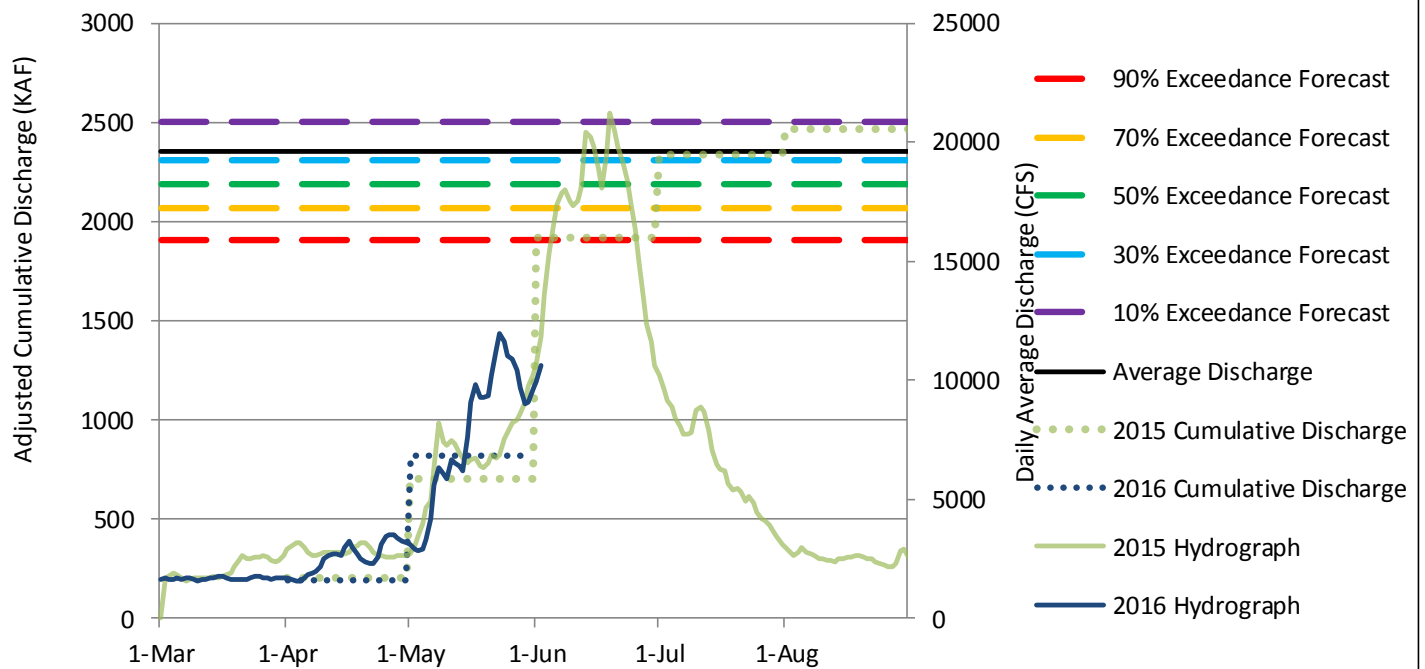
Upper Colorado River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Colorado River near Cameo, CO

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)

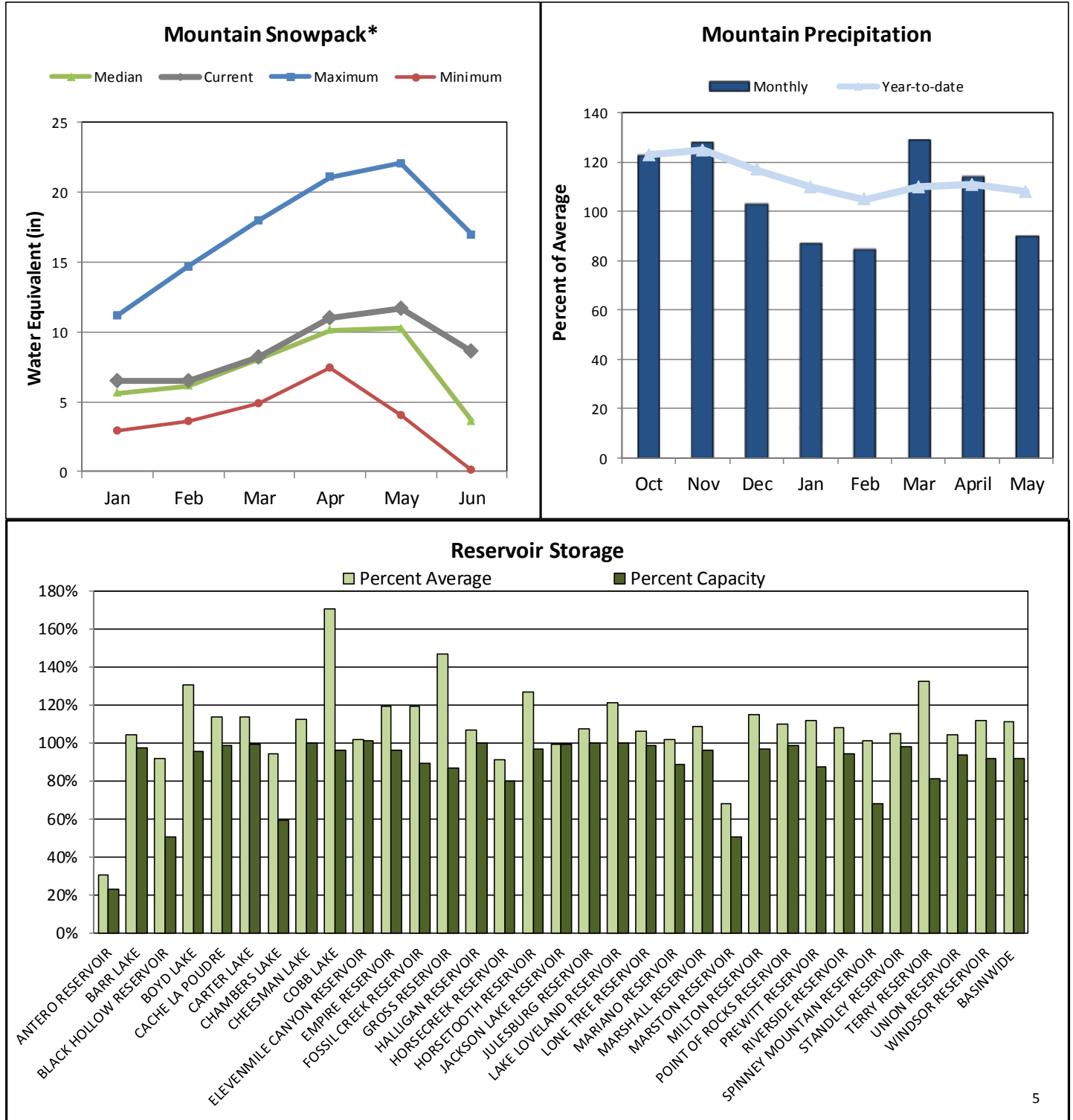


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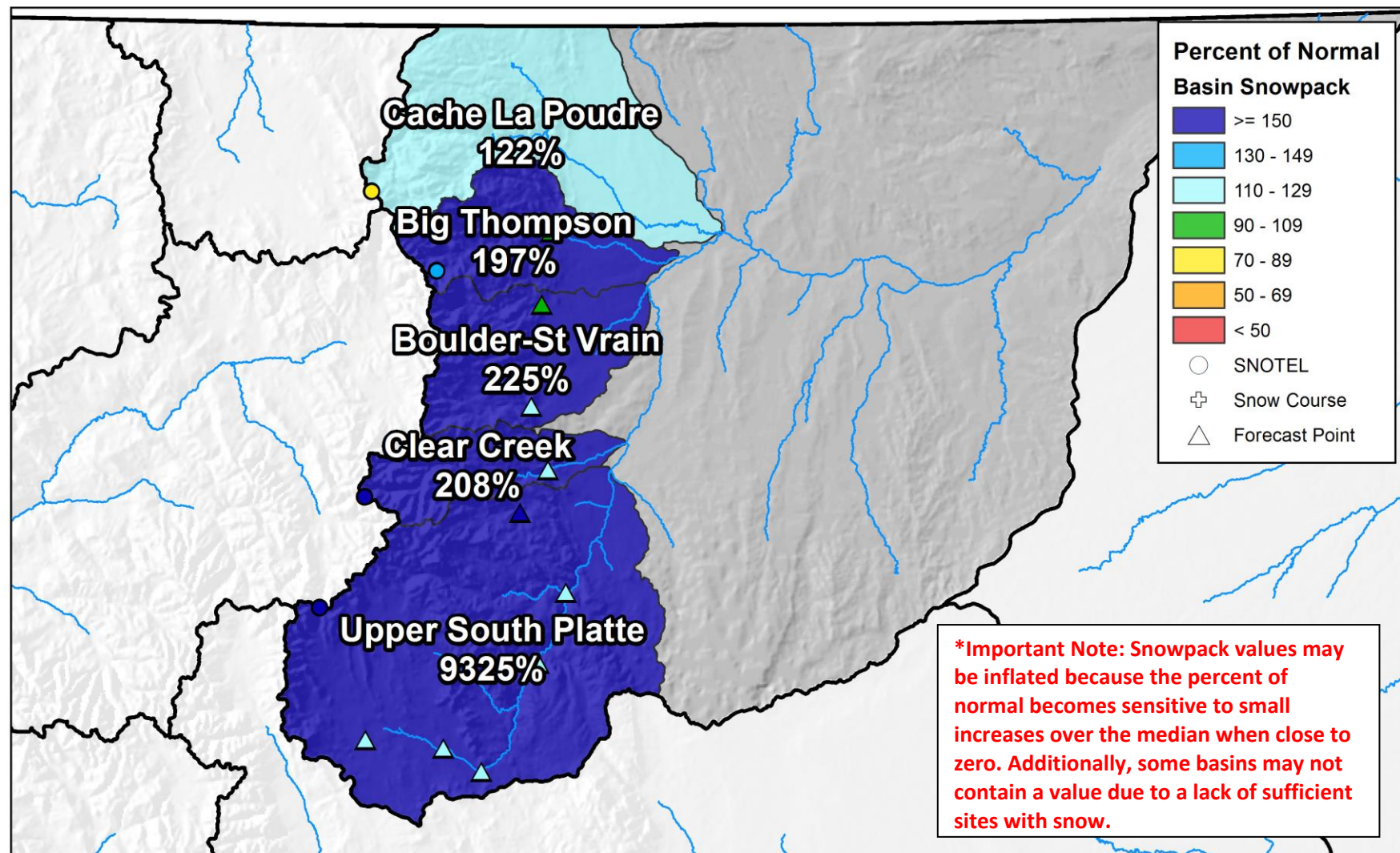
SOUTH PLATTE RIVER BASIN

June 1, 2016

Snowpack in the South Platte River basin is above normal at 233% of the median. Precipitation for May was 90% of average which brings water year-to-date precipitation to 107%. Reservoir storage at the end of May was 112% of average compared to 114% last year. Streamflow forecasts range from 189% of average for Bear Creek above Evergreen to 103% for the Saint Vrain at Lyons.



South Platte River Basin Snowpack and Streamflow Forecasts June 1, 2016



0 10 20 40 60 80 Miles



United States Department of Agriculture

Natural Resources Conservation Service

South Platte River Basin
Streamflow Forecasts - June 1, 2016

Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

SOUTH PLATTE RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Antero Reservoir Inflow ²	APR-JUL	13.9	15.3	16.3	112%	17.3	18.7	14.5
	APR-SEP	16.5	18.7	20	112%	22	24	17.8
	JUN-JUL	8.7	10.1	11.1	111%	12.1	13.5	10
	JUN-SEP	11.3	13.5	14.8	112%	16.8	18.8	13.2
Spinney Mountain Reservoir Inflow ²	APR-JUL	39	48	54	113%	61	72	48
	APR-SEP	47	60	69	113%	79	96	61
	JUN-JUL	27	36	42	124%	49	60	34
	JUN-SEP	35	48	57	124%	67	84	46
Elevenmile Canyon Reservoir Inflow ²	APR-JUL	41	50	56	112%	63	74	50
	APR-SEP	49	62	72	113%	83	101	64
	JUN-JUL	28	37	43	123%	50	61	35
	JUN-SEP	36	49	59	123%	70	88	48
Cheesman Lake Inflow ²	APR-JUL	89	106	118	118%	131	153	100
	APR-SEP	106	131	150	119%	171	205	126
	JUN-JUL	50	67	79	130%	92	114	61
	JUN-SEP	67	92	111	126%	132	166	88
South Platte R at South Platte ²	APR-JUL	169	194	215	119%	235	265	180
	APR-SEP	197	235	265	118%	295	350	225
	JUN-JUL	78	103	122	115%	143	176	106
	JUN-SEP	106	145	174	114%	205	260	153
Bear Ck ab Evergreen	APR-JUL	27	29	31	189%	33	36	16.4
	APR-SEP	31	34	37	176%	39	44	21
	JUN-JUL	7	9.3	11.1	126%	13	16.2	8.8
	JUN-SEP	11.1	14.5	17	126%	19.7	24	13.5
Clear Ck at Golden	APR-JUL	101	113	121	115%	130	144	105
	APR-SEP	119	134	146	114%	158	177	128
	JUN-JUL	60	72	80	105%	89	103	76
	JUN-SEP	78	93	105	105%	117	136	100
St. Vrain Ck at Lyons ²	APR-JUL	78	86	91	103%	97	105	88
	APR-SEP	91	101	108	105%	116	127	103
	JUN-JUL	48	56	61	105%	67	75	58
	JUN-SEP	61	71	78	107%	86	97	73
Boulder Ck nr Orodell ²	APR-JUL	51	55	58	107%	61	66	54
	APR-SEP	59	64	68	108%	72	78	63
	JUN-JUL	37	41	44	122%	47	52	36
	JUN-SEP	45	50	54	120%	58	64	45
South Boulder Ck nr Eldorado Springs ²	APR-JUL	32	38	43	110%	48	57	39
	APR-SEP	35	42	48	112%	55	65	43
	JUN-JUL	15	21	26	113%	31	40	23
	JUN-SEP	17.5	25	31	115%	38	48	27
Big Thompson R at Canyon Mouth ²	APR-JUL	78	87	94	104%	101	111	90
	APR-SEP	92	104	113	106%	122	136	107
	JUN-JUL	53	62	69	110%	76	86	63
	JUN-SEP	67	79	88	110%	97	111	80
Cache La Poudre at Canyon Mouth ²	APR-JUL	255	280	300	133%	320	350	225
	APR-SEP	270	300	320	128%	345	385	250
	JUN-JUL	111	136	155	108%	175	205	143
	JUN-SEP	127	156	178	108%	200	240	165

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

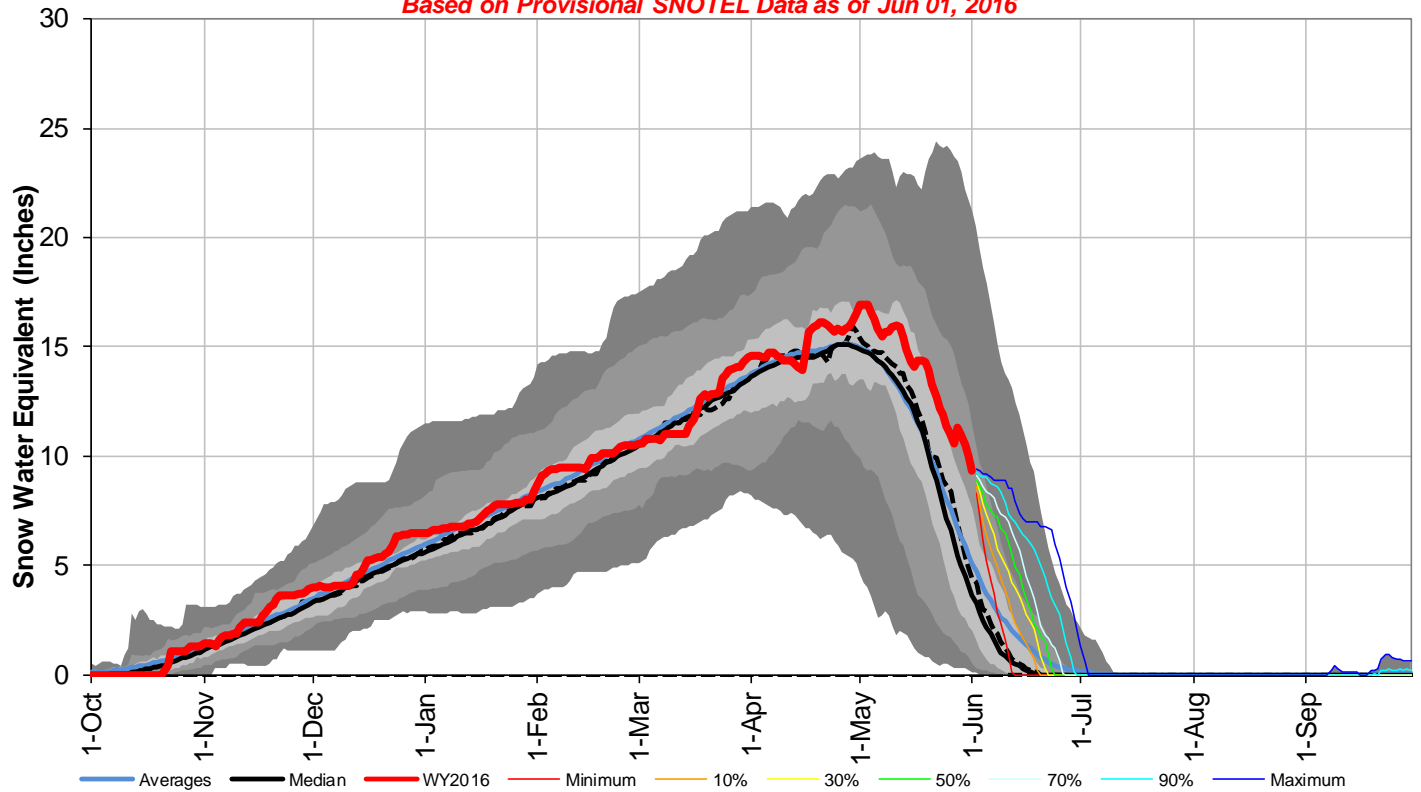
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Antero Reservoir	4.6	15.6	15.2	19.9
Barr Lake	29.4	28.8	28.2	30.1
Black Hollow Reservoir	3.3	4.8	3.6	6.5
Boyd Lake	46.3	31.8	35.4	48.4
Cache La Poudre	10.0	10.9	8.8	10.1
Carter Lake	108.2	107.4	95.2	108.9
Chambers Lake	5.2	8.7	6.5	8.8
Cheesman Lake	79.3	79.9	70.3	79.0
Cobb Lake	21.5	22.0	12.6	22.3
Elevenmile Canyon Reservoir	99.5	102.4	97.3	98.0
Empire Reservoir	35.1	34.5	29.4	36.5
Fossil Creek Reservoir	9.9	9.7	8.3	11.1
Gross Reservoir	25.9	29.3	17.6	29.8
Halligan Reservoir	6.4	6.4	6.0	6.4
Horse Creek Reservoir	11.8	12.5	12.9	14.7
Horsetooth Reservoir	145.0	148.6	114.2	149.7
Jackson Lake Reservoir	25.9	26.7	26.1	26.1
Julesburg Reservoir	20.5	19.8	19.0	20.5
Lake Loveland Reservoir	10.3	10.1	8.5	10.3
Lone Tree Reservoir	8.6	8.8	8.1	8.7
Mariano Reservoir	4.8	5.1	4.7	5.4
Marshall Reservoir	9.6	9.6	8.8	10.0
Marston Reservoir	6.6	0.0	9.7	13.0
Milton Reservoir	22.8	22.5	19.8	23.5
Point Of Rocks Reservoir	69.6	71.6	63.2	70.6
Prewitt Reservoir	24.6	24.6	22.0	28.2
Ralph Price Reservoir	15.0	14.5	16.2	16.2
Riverside Reservoir	52.6	54.5	48.5	55.8
Spinney Mountain Reservoir	33.5	47.4	33.1	49.0
Standley Reservoir	41.2	41.2	39.1	42.0
Terry Reservoir	6.5	7.9	4.9	8.0
Union Reservoir	12.2	12.2	11.7	13.0
Windsor Reservoir	14.0	14.6	12.5	15.2
Basin-wide Total	1004.7	1029.9	900.2	1079.5
# of reservoirs	32	32	32	32

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
BIG THOMPSON BASIN	3	197%	249%
BOULDER CREEK BASIN	3	225%	317%
CACHE LA POUFRE BASIN	2	122%	133%
CLEAR CREEK BASIN	2	208%	233%
SAINT VRAIN BASIN	1		
UPPER SOUTH PLATTE BASIN	6	8750%	16650%
SOUTH PLATTE RIVER BASIN	17	233%	320%

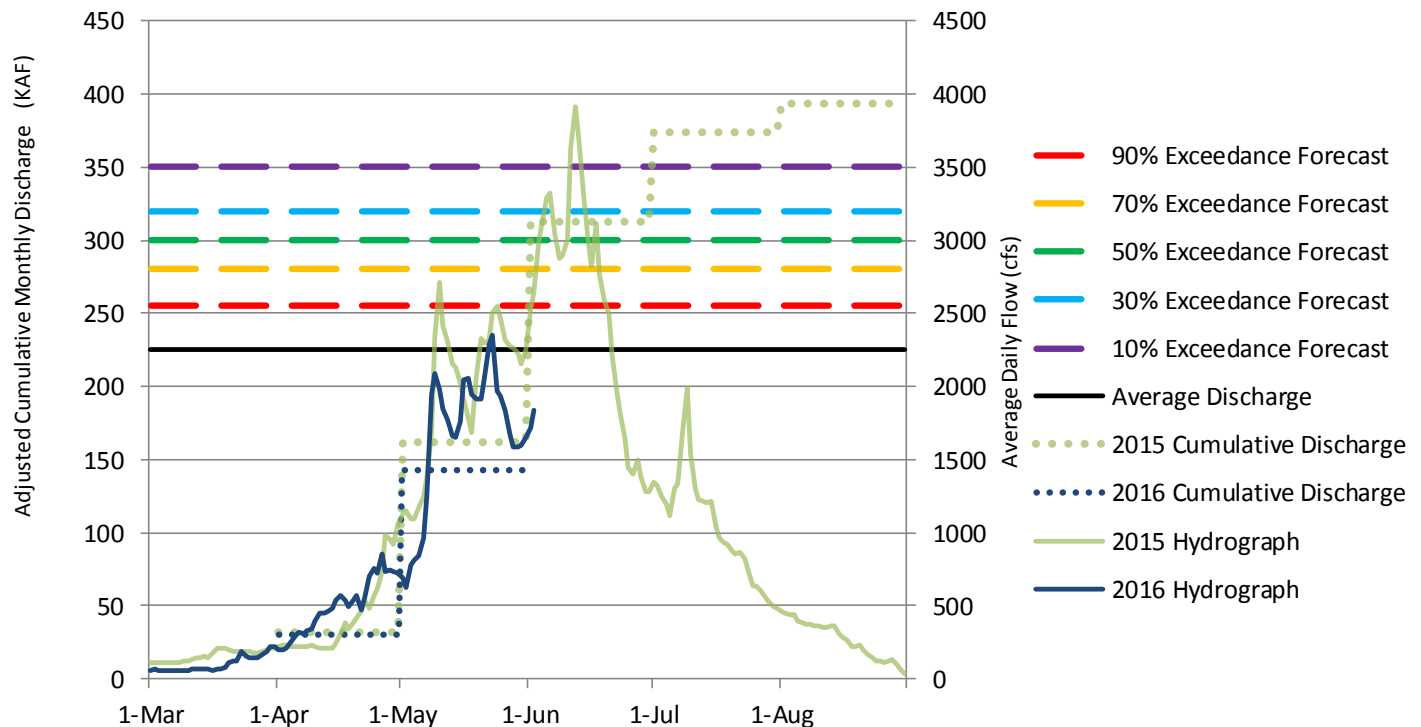
South Platte River Basin with Non-Exceedance Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Cache La Poudre River at Canyon Mouth

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)



Please refer to the sections at the end of this report for further explanation concerning these graphs.

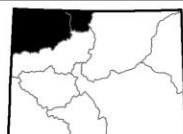
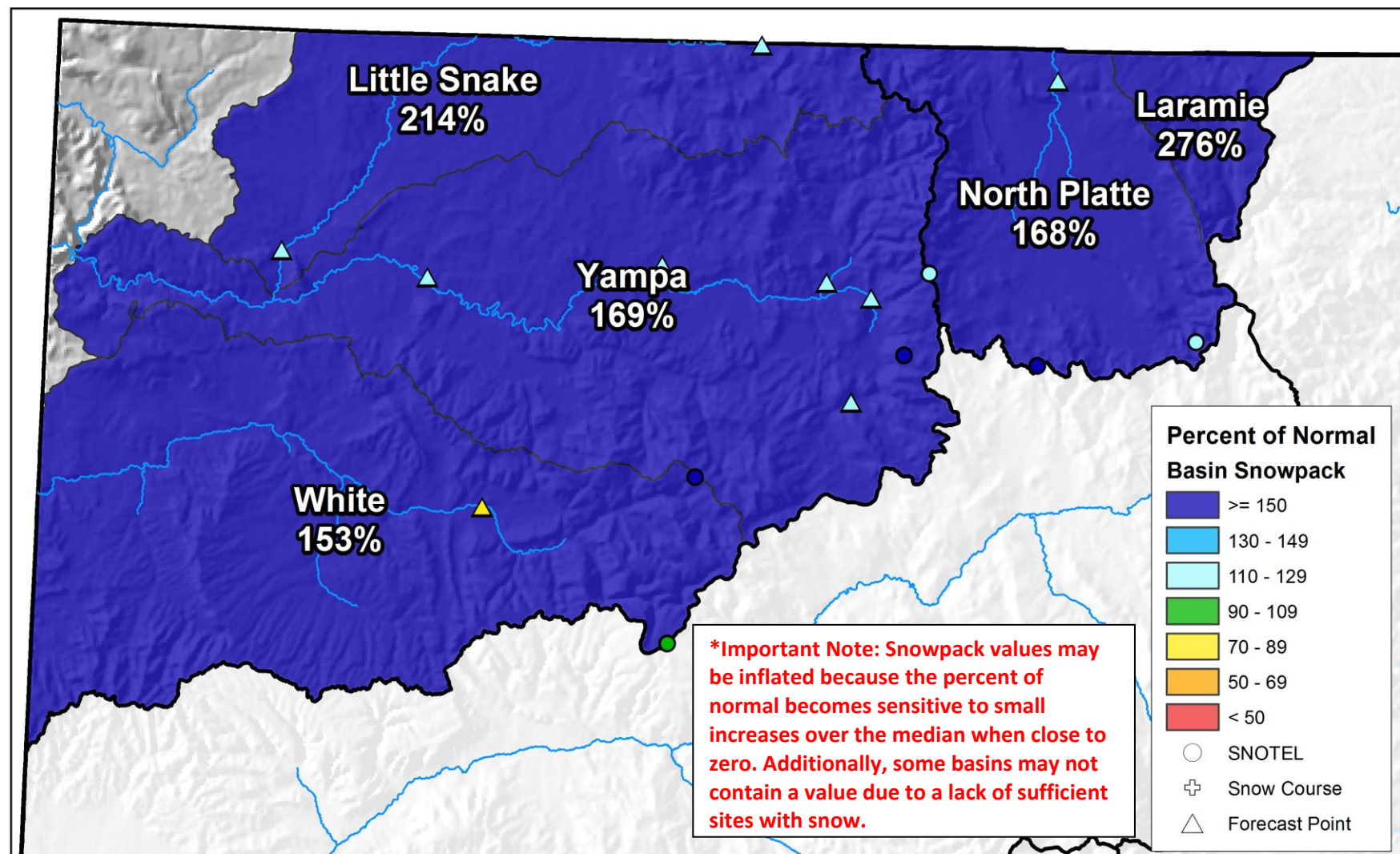
YAMPA, WHITE, NORTH PLATTE AND LARAMIE RIVER BASINS

June 1, 2016

Snowpack in the Yampa, White & North Platte basins is above normal at 186% of the median. Precipitation for May was 135% of average and water year-to-date precipitation is at 107% of average. Reservoir storage at the end of May was 114% of average compared to 113% last year. Streamflow forecasts range from 138% of average for the Laramie River near Woods to 88% for the White River near Meeker.



Yampa, White, and North Platte River Basins Snowpack and Streamflow Forecasts June 1, 2016



0 10 20 40 60 80 Miles



United States Department of Agriculture

Natural Resources Conservation Service

Yampa-White-North Platte River Basins Streamflow Forecasts - June 1, 2016

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

YAMPA-WHITE-NORTH PLATTE RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
North Platte R nr Northgate	JUN-JUL	113	139	157	128%	175	200	123
	JUN-SEP	132	164	186	127%	210	240	146
Laramie R nr Woods ²	JUN-JUL	76	89	98	138%	107	120	71
	JUN-SEP	87	102	112	137%	122	137	82
Yampa R ab Stagecoach Reservoir ²	APR-JUL	24	26	27	117%	29	32	23
	JUN-JUL	4.4	6.4	8	93%	9.8	12.7	8.6
Yampa R at Steamboat Springs ²	APR-JUL	270	290	310	119%	325	355	260
	JUN-JUL	90	113	130	109%	148	177	119
Elk R nr Milner	APR-JUL	355	385	410	128%	435	475	320
	JUN-JUL	146	177	200	126%	225	265	159
Elkhead Ck ab Long Gulch	APR-JUL	84	88	92	126%	96	102	73
	JUN-JUL	5.3	9.5	13.1	126%	17.2	24	10.4
Yampa R nr Maybell ²	APR-JUL	1000	1070	1120	120%	1170	1250	935
	JUN-JUL	340	410	460	118%	515	595	390
Little Snake R nr Slater ²	APR-JUL	169	183	193	124%	205	220	156
	JUN-JUL	56	70	80	121%	91	108	66
Little Snake R nr Dixon ²	APR-JUL	350	385	410	119%	440	485	345
	JUN-JUL	95	129	155	115%	183	230	135
Little Snake R nr Lily ²	APR-JUL	360	400	435	126%	475	535	345
	JUN-JUL	92	135	170	127%	210	270	134
White R nr Meeker	APR-JUL	210	230	245	88%	255	280	280
	JUN-JUL	83	102	115	80%	129	152	144

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

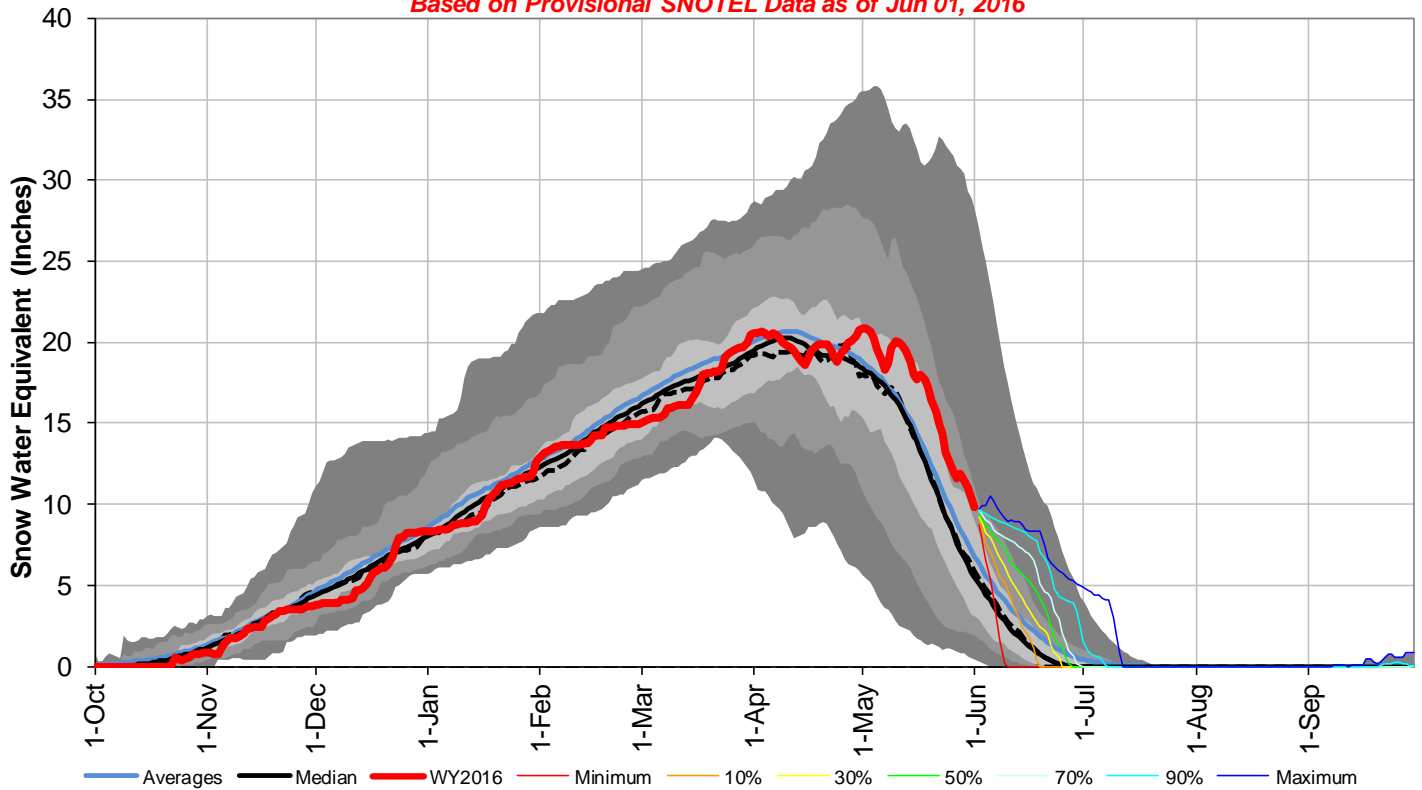
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Stagecoach Reservoir nr Oak Creek	36.4	36.0	32.1	36.5
Yamcolo Reservoir	8.8	8.8	7.4	8.7
Basin-wide Total	45.2	44.8	39.5	45.2
# of reservoirs	2	2	2	2

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
LARAMIE RIVER BASIN	2	276%	153%
NORTH PLATTE RIVER BASIN	8	168%	100%
LARAMIE & NORTH PLATTE RIVER BASINS	10	182%	107%
ELK RIVER BASIN	2		
YAMPA RIVER BASIN	9	169%	99%
WHITE RIVER BASIN	4	153%	132%
YAMPA & WHITE RIVER BASINS	12	151%	98%
LITTLE SNAKE RIVER BASIN	7	214%	81%
YAMPA-WHITE-NORTH PLATTE RIVER BASINS	26	186%	107%

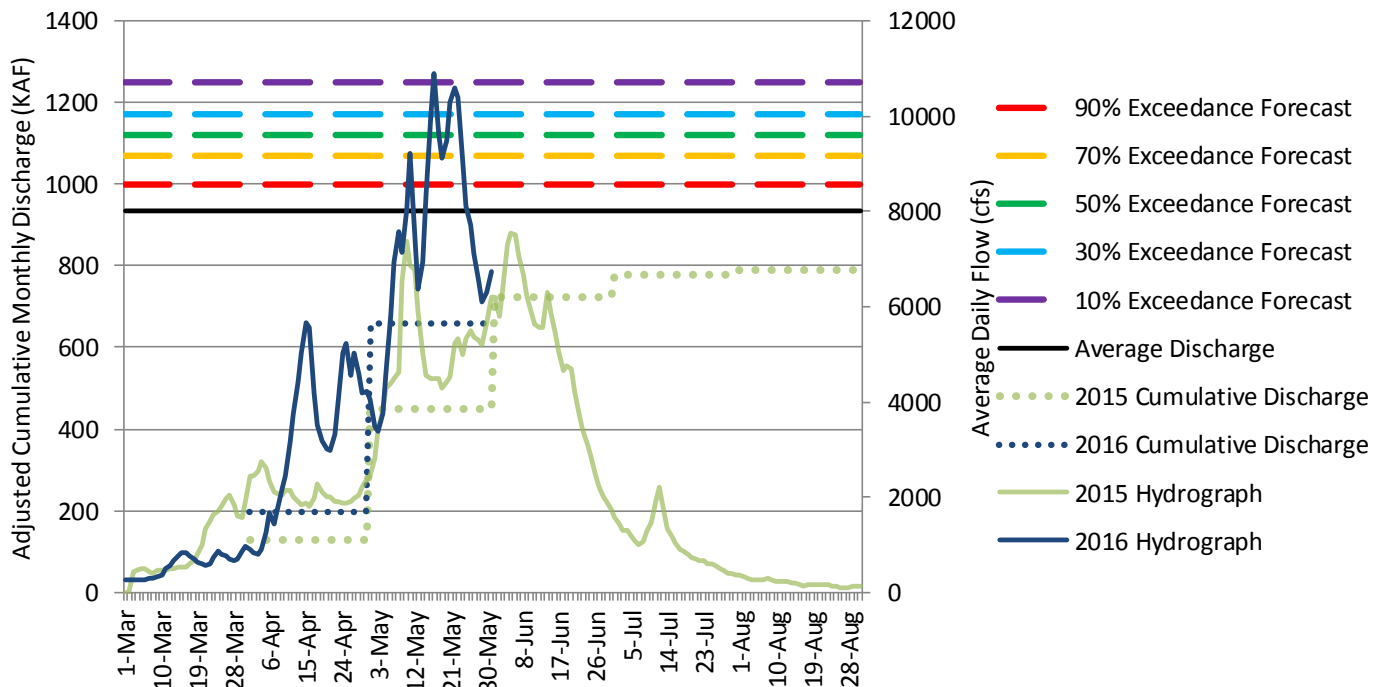
Yampa, White & North Platte River Basins with Non-Exceedance Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Yampa River near Maybell

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)

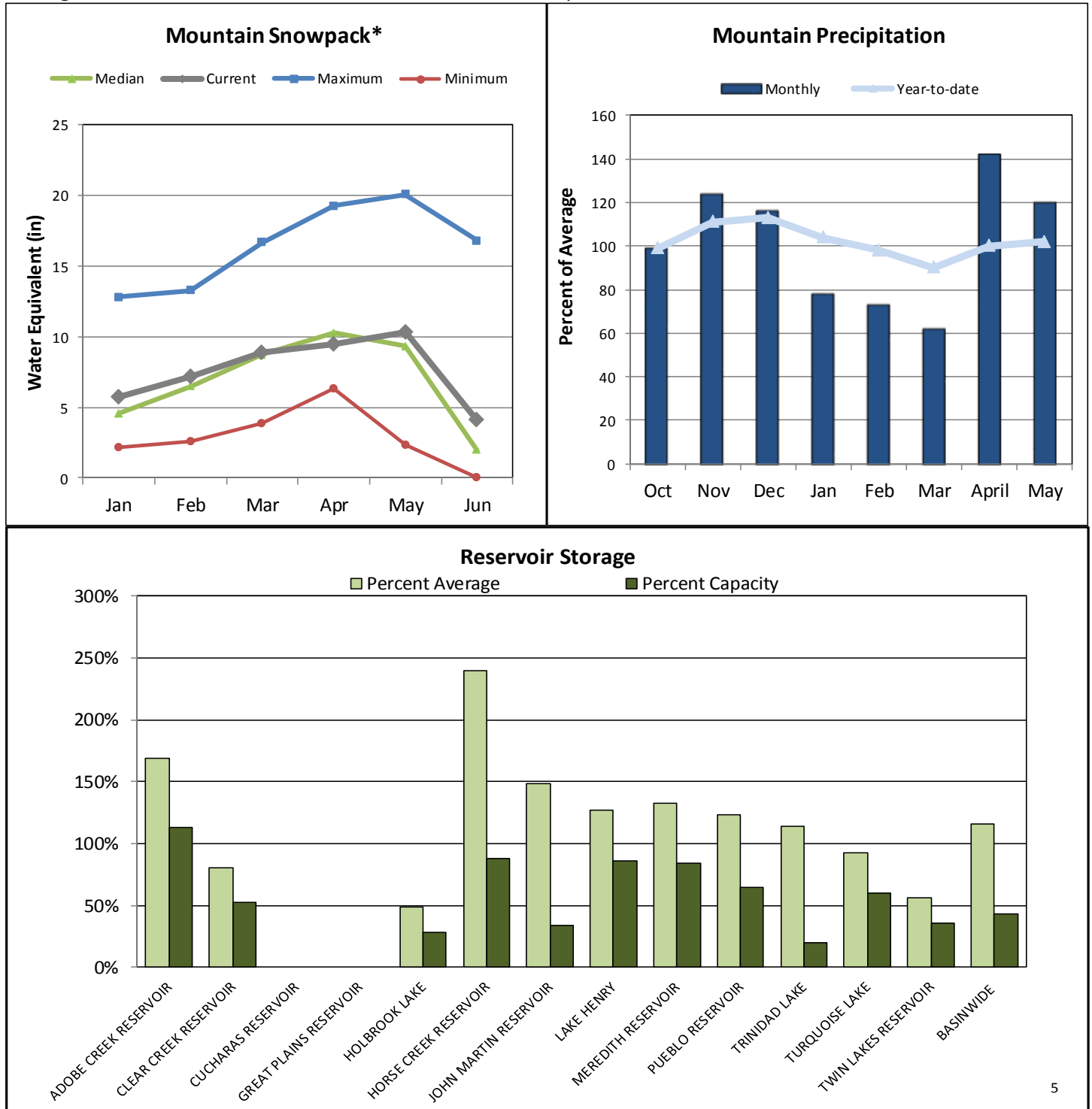


Please refer to the sections at the end of this report for further explanation concerning these graphs.

ARKANSAS RIVER BASIN

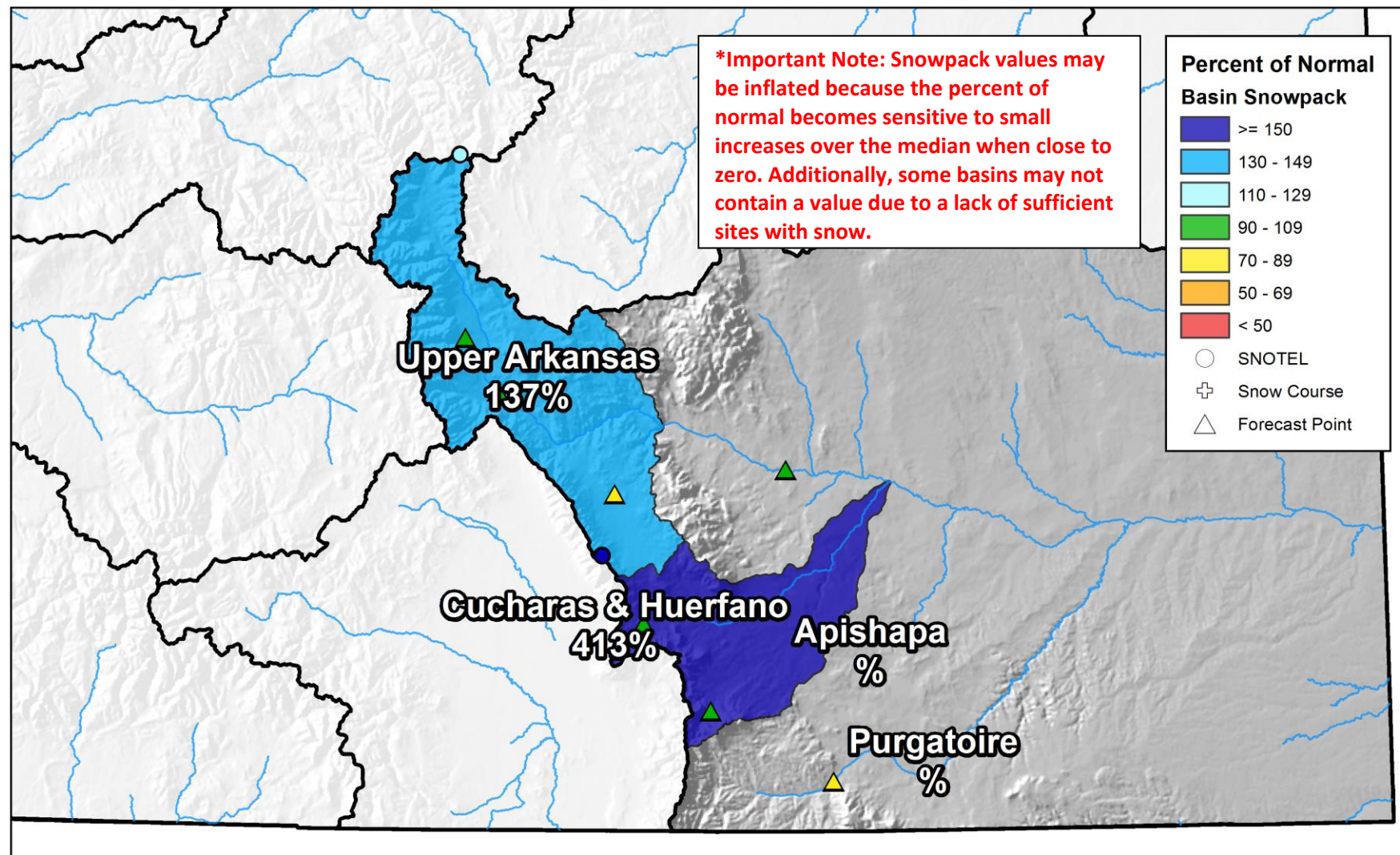
June 1, 2016

Snowpack in the Arkansas River basin is above normal at 208% of the median. Precipitation for May was 120% of average which brings water year-to-date precipitation to 102% of average. Reservoir storage at the end of May was 116% of average compared to 108% last year. Current streamflow forecasts range from 93% of average for the inflow to Pueblo Reservoir to 74% for Grape Creek near Westcliffe.



Arkansas River Basin Snowpack and Streamflow Forecasts

June 1, 2016



0 10 20 40 60 80
Miles



United States Department of Agriculture

Natural Resources Conservation Service

Arkansas River Basin

Streamflow Forecasts - June 1, 2016

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

ARKANSAS RIVER BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Chalk Ck nr Nathrop	APR-JUL	12.4	15.9	18.6	89%	22	27	21
	APR-SEP	15.2	20	24	92%	28	35	26
	JUN-JUL	8.6	12.1	14.8	91%	18.2	23	16.3
	JUN-SEP	11.4	16.2	20	95%	24	31	21
Arkansas R at Salida ²	APR-JUL	161	196	220	92%	250	295	240
	APR-SEP	189	240	275	93%	315	380	295
	JUN-JUL	110	145	169	97%	199	245	174
	JUN-SEP	138	189	225	98%	265	330	230
Grape Ck nr Westcliffe	APR-JUL	6.8	9.4	11.7	74%	14.4	19.1	15.9
	APR-SEP	8.9	12.5	15.5	79%	18.9	25	19.6
	JUN-JUL	2.8	5.4	7.7	93%	10.4	15.1	8.3
	JUN-SEP	4.9	8.5	11.5	96%	14.9	21	12
Pueblo Reservoir Inflow ²	APR-JUL	255	300	335	93%	370	430	360
	APR-SEP	315	380	430	95%	485	570	455
	JUN-JUL	160	205	240	100%	275	335	240
	JUN-SEP	220	285	335	100%	390	475	335
Huerfano R nr Redwing	APR-JUL	7.9	9.5	10.7	90%	12	14.2	11.9
	APR-SEP	10.1	12.3	14	92%	15.8	18.8	15.2
	JUN-JUL	4.2	5.8	7	99%	8.3	10.5	7.1
	JUN-SEP	6.4	8.6	10.3	99%	12.1	15.1	10.4
Cucharas R nr La Veta	APR-JUL	8.5	9.8	10.8	89%	11.9	13.6	12.2
	APR-SEP	10.1	11.6	12.7	90%	13.9	15.9	14.1
	JUN-JUL	3.5	4.8	5.8	97%	6.9	8.6	6
	JUN-SEP	5.1	6.6	7.7	99%	8.9	10.9	7.8
Trinidad Lake Inflow ²	MAR-JUL	24	29	32	86%	37	43	37
	APR-SEP	28	36	41	87%	48	58	47
	JUN-JUL	9.3	13.9	17.5	90%	22	28	19.4
	JUN-SEP	15.3	23	28	90%	35	45	31

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

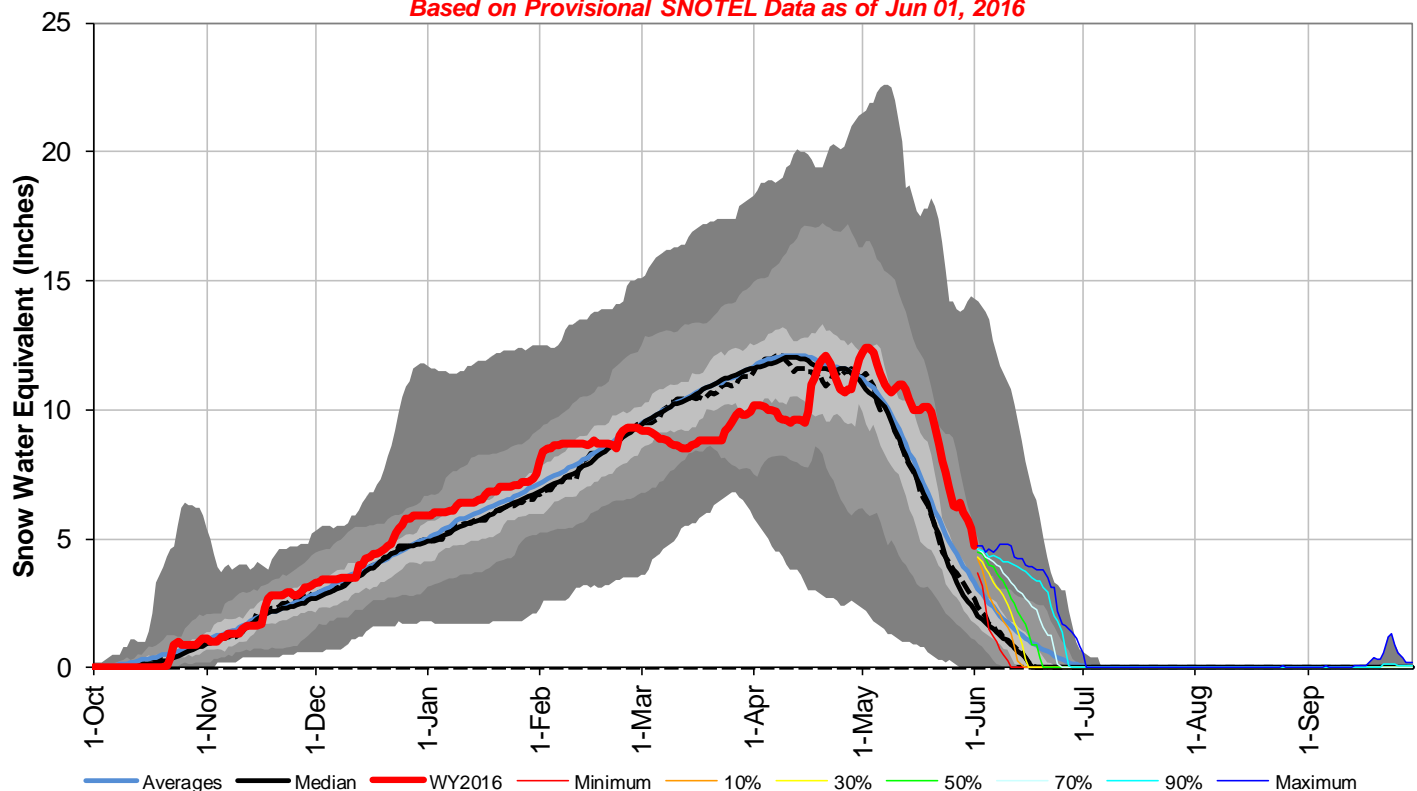
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Adobe Creek Reservoir	69.9	60.5	41.4	62.0
Clear Creek Reservoir	6.0	9.0	7.5	11.4
Cucharas Reservoir			6.0	40.0
Great Plains Reservoir	0.0	0.0	37.4	150.0
Holbrook Lake	2.0	6.4	4.1	7.0
Horse Creek Reservoir	23.7	1.0	9.9	27.0
John Martin Reservoir	210.6	168.4	141.9	616.0
Lake Henry	8.0	9.7	6.3	9.4
Meredith Reservoir	35.5	43.6	26.8	42.0
Pueblo Reservoir	229.6	243.5	186.4	354.0
Trinidad Lake	33.5	29.7	29.3	167.0
Turquoise Lake	75.8	63.4	82.3	127.0
Twin Lakes Reservoir	31.0	46.4	54.9	86.0
Basin-wide Total	725.6	681.6	628.2	1658.8
# of reservoirs	12	12	12	12

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
UPPER ARKANSAS BASIN	3	137%	196%
CUCHARAS & HUERFANO BASINS	3	413%	556%
PURGATOIRE RIVER BASIN	2		
ARKANSAS RIVER BASIN	8	208%	282%

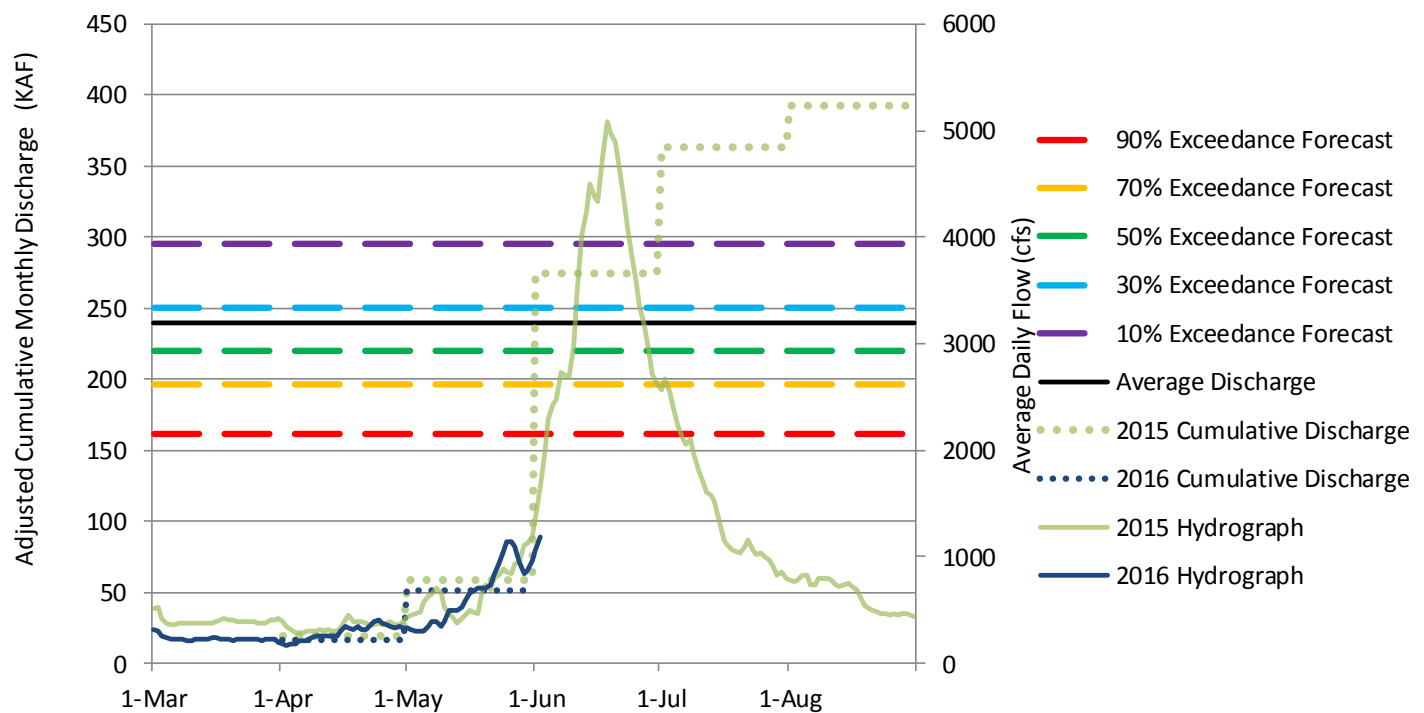
Arkansas River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Arkansas River at Salida, CO

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)

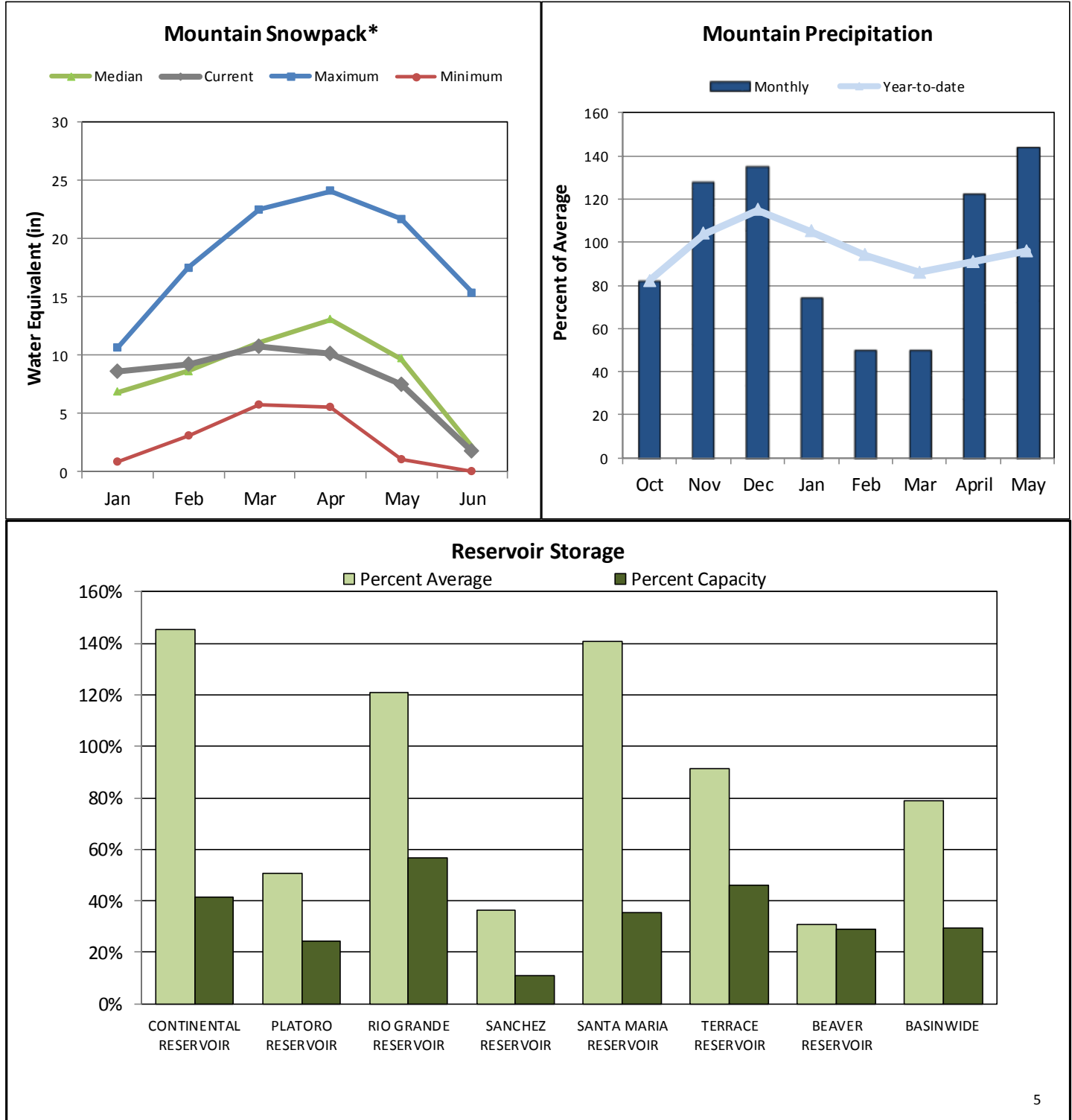


Please refer to the sections at the end of this report for further explanation concerning these graphs.

UPPER RIO GRANDE RIVER BASIN

June 1, 2016

Snowpack in the Upper Rio Grande River basin is below normal at 85% of median. Precipitation for May was 144% of average which brings water year-to-date precipitation to 96% of average. Reservoir storage at the end of May was 79% of average compared to 67% last year. Streamflow forecasts range from 103% of average for Saguache Creek near Saguache to 52% of average for the San Antonio River at Ortiz.

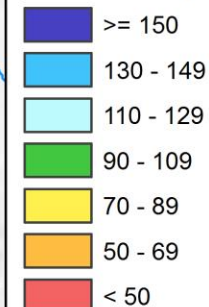


Upper Rio Grande River Basin Snowpack and Streamflow Forecasts

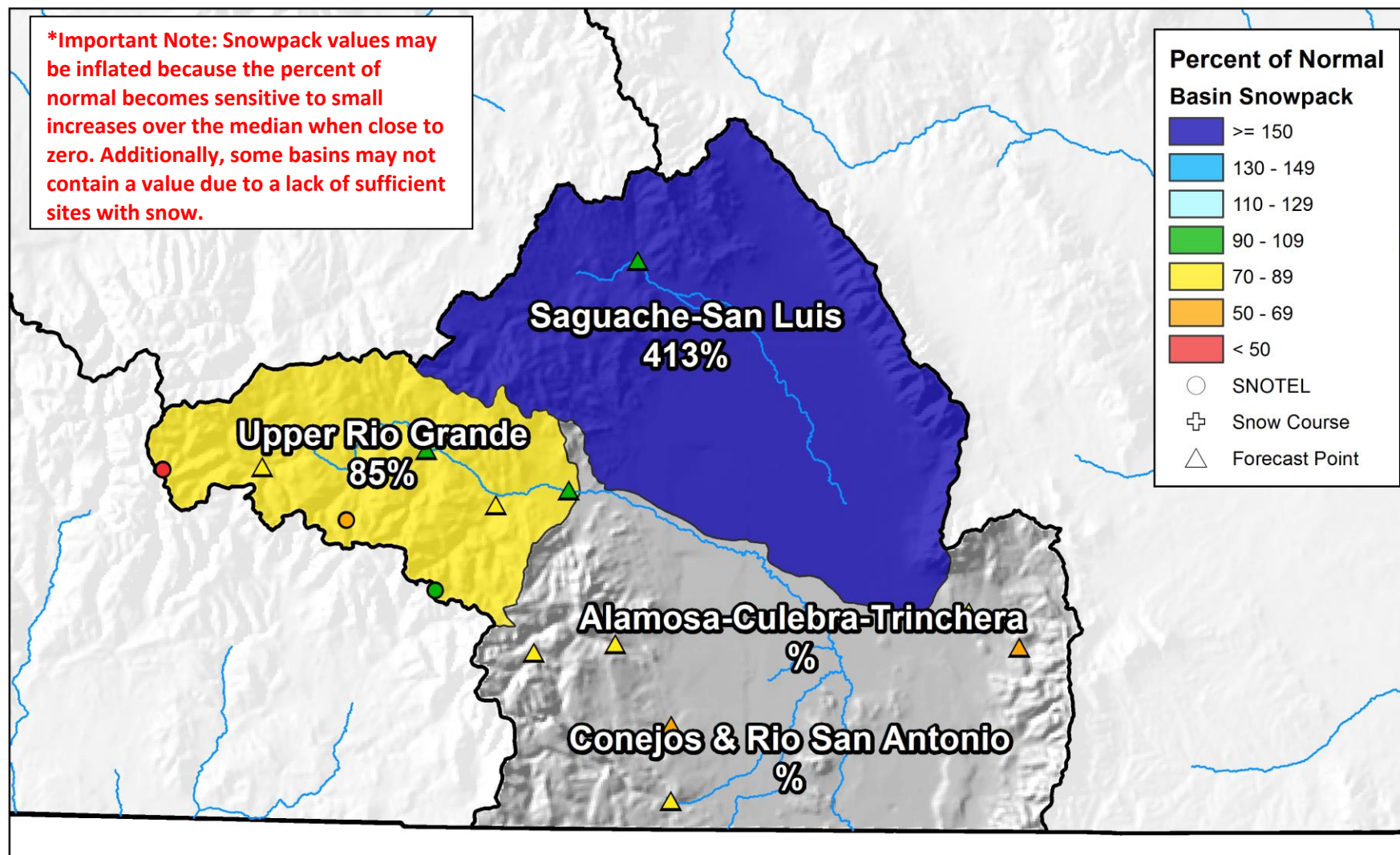
June 1, 2016

***Important Note:** Snowpack values may be inflated because the percent of normal becomes sensitive to small increases over the median when close to zero. Additionally, some basins may not contain a value due to a lack of sufficient sites with snow.

Percent of Normal Basin Snowpack



- SNOTEL
- + Snow Course
- △ Forecast Point



0 10 20 40 60 80 Miles



United States Department of Agriculture

Natural Resources Conservation Service

Upper Rio Grande Basin Streamflow Forecasts - June 1, 2016

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

UPPER RIO GRANDE BASIN	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Rio Grande at Thirty Mile Bridge ²	APR-JUL	80	88	94	83%	100	110	113
	APR-SEP	90	101	109	84%	118	131	129
	JUN-JUL	38	46	52	76%	58	68	68
	JUN-SEP	48	59	67	80%	76	89	84
Rio Grande at Wagon Wheel Gap ²	APR-SEP	270	295	315	93%	335	370	340
	JUN-SEP	122	149	169	80%	190	225	210
SF Rio Grande at South Fork ²	APR-SEP	100	106	111	87%	116	123	127
	JUN-SEP	33	39	44	68%	49	56	65
Rio Grande nr Del Norte ²	APR-SEP	390	440	475	92%	520	585	515
	JUN-SEP	144	194	230	75%	275	340	305
Saguache Ck nr Saguache	APR-SEP	27	30	33	103%	36	41	32
	JUN-SEP	8.7	12.2	15	75%	18.1	23	20
Alamosa Ck ab Terrace Reservoir	APR-SEP	47	52	56	82%	60	66	68
	JUN-SEP	21	26	30	79%	34	40	38
La Jara Ck nr Capulin	MAR-JUL	4.7	5.3	5.7	64%	6.1	7	8.9
	JUN-JUL	0.7	1.21	1.64	71%	2.1	3	2.3
Trinchera Ck ab Turners Ranch	APR-SEP	6.9	7.9	8.6	68%	9.4	10.6	12.6
	JUN-SEP	4.2	5.2	5.9	76%	6.7	7.9	7.8
Sangre de Cristo Ck ²	APR-SEP	8.6	9.7	10.6	65%	11.7	13.4	16.3
	JUN-SEP	1.37	2.4	3.3	66%	4.4	6.1	5
Ute Ck nr Fort Garland	APR-SEP	6.7	8.4	9.7	76%	11.2	13.7	12.8
	JUN-SEP	3.5	5.2	6.5	81%	8	10.5	8
Platoro Reservoir Inflow	APR-JUL	41	45	48	86%	51	56	56
	APR-SEP	44	49	53	85%	57	64	62
	JUN-JUL	23	27	30	86%	33	38	35
	JUN-SEP	26	31	35	85%	39	46	41
Conejos R nr Mogote ²	APR-SEP	127	142	153	79%	165	184	194
	JUN-SEP	59	74	85	76%	97	116	112
San Antonio R at Ortiz	APR-SEP	7.5	7.8	8.1	52%	8.4	9	15.6
	JUN-SEP	0.4	0.72	1	80%	1.32	1.87	1.25
Los Pinos R nr Ortiz	APR-SEP	42	49	57	78%	68	89	73
	JUN-SEP	1.3	8.2	16.2	68%	27	48	24
Culebra Ck at San Luis	APR-SEP	7.9	11.1	13.8	60%	16.9	22	23
	JUN-SEP	4.7	7.9	10.6	71%	13.7	18.9	14.9
Costilla Reservoir Inflow	MAR-JUL	7.6	8.2	8.7	78%	9.1	9.9	11.1
	JUN-JUL	3.3	3.9	4.4	83%	4.8	5.6	5.3
Costilla Ck nr Costilla ²	MAR-JUL	18.6	19.9	21	81%	22	23	26
	JUN-JUL	5.5	6.8	7.7	78%	8.7	10.3	9.9

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

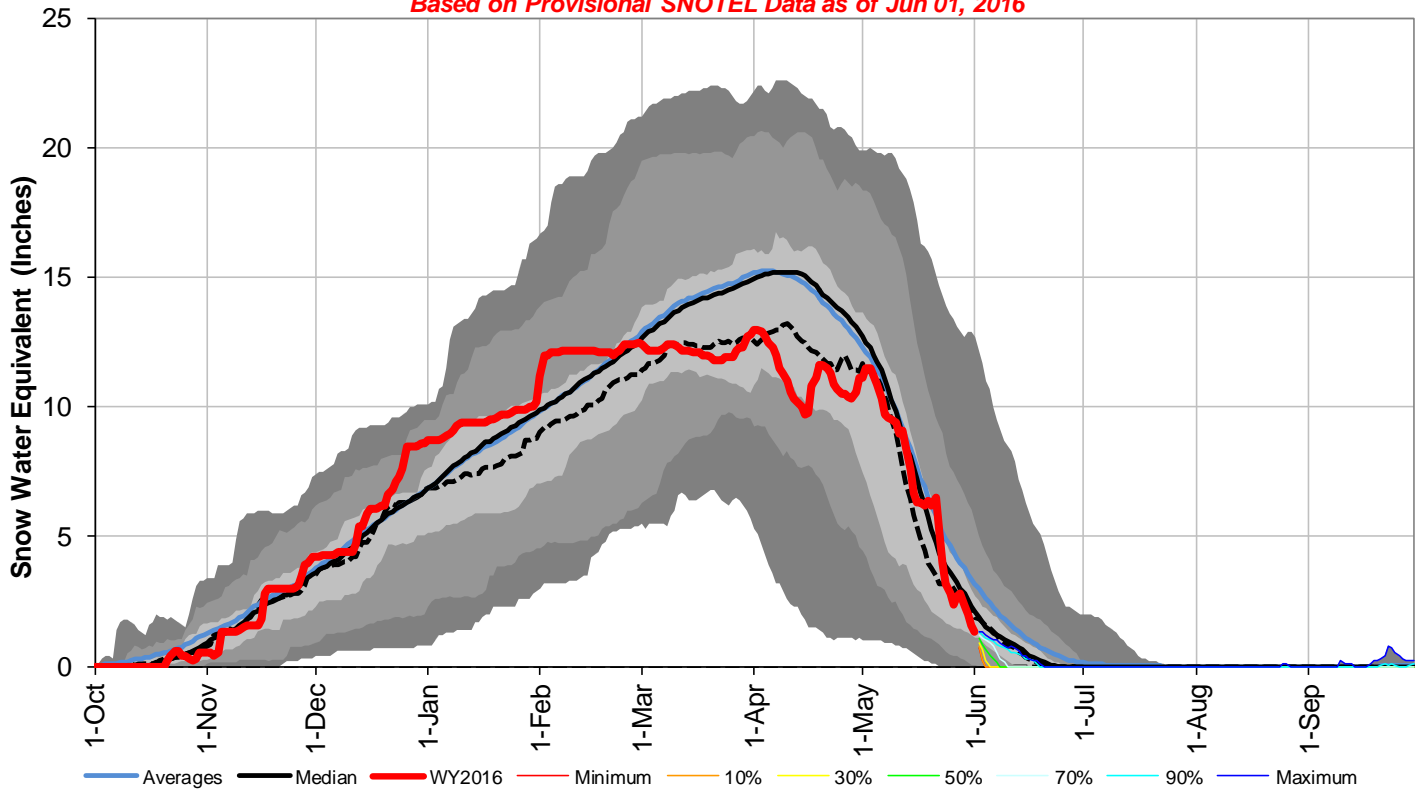
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Beaver Reservoir	1.3	0.0	4.2	4.5
Continental Reservoir	11.2	0.0	7.7	27.0
Platoro Reservoir	14.5	12.1	28.7	60.0
Rio Grande Reservoir	28.9	29.7	23.9	51.0
Sanchez Reservoir	11.2	3.6	30.8	103.0
Santa Maria Reservoir	15.9	24.8	11.3	45.0
Terrace Reservoir	8.3	6.9	9.1	18.0
Basin-wide Total	91.3	77.1	115.7	308.5
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
ALAMOSA CREEK BASIN	1		
CONEJOS & RIO SAN ANTONIO BASINS	2		
CULEBRA & TRINCHERA BASINS	3		
HEADWATERS RIO GRANDE RIVER BASIN	6	85%	86%
UPPER RIO GRANDE BASIN	12	85%	86%

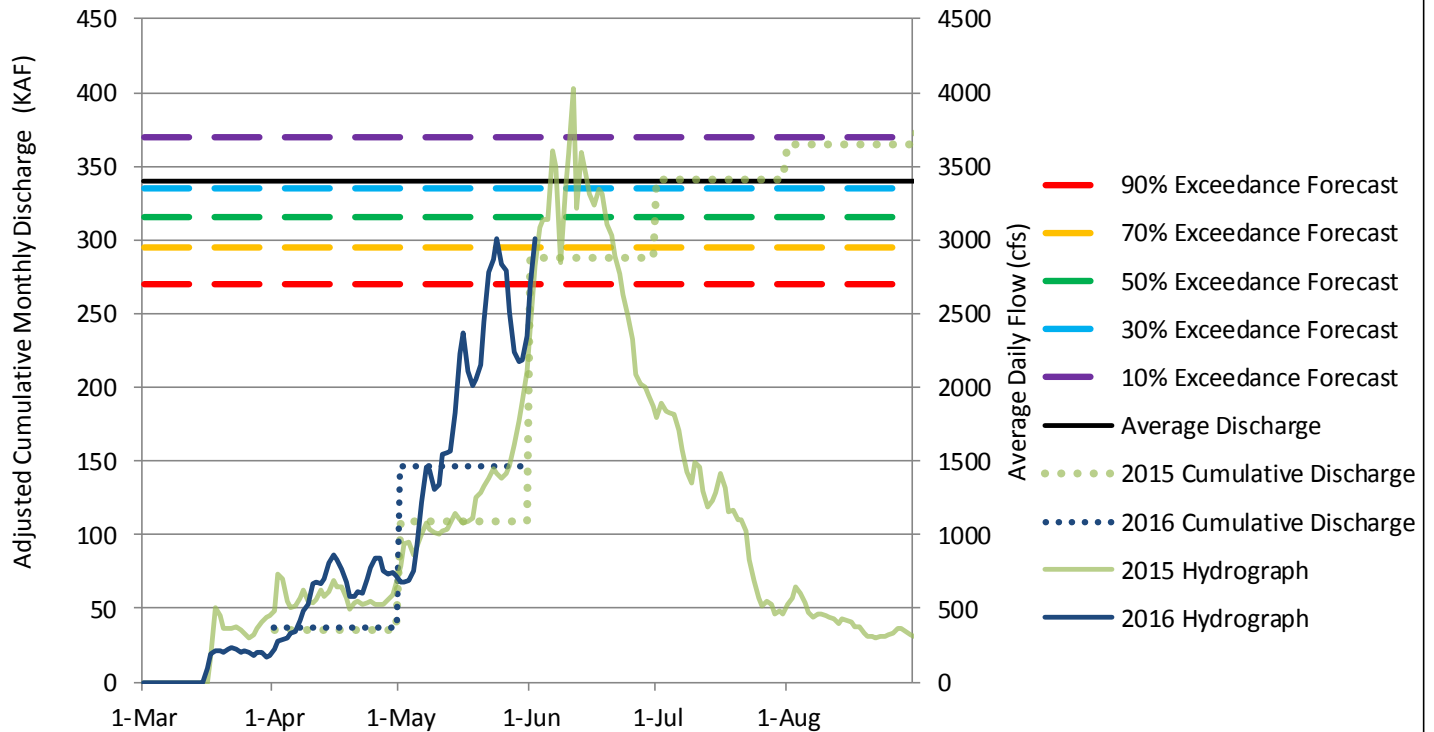
Upper Rio Grande River Basin with Non-Exceedance Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Rio Grande at Wagon Wheel Gap

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr-Sep)

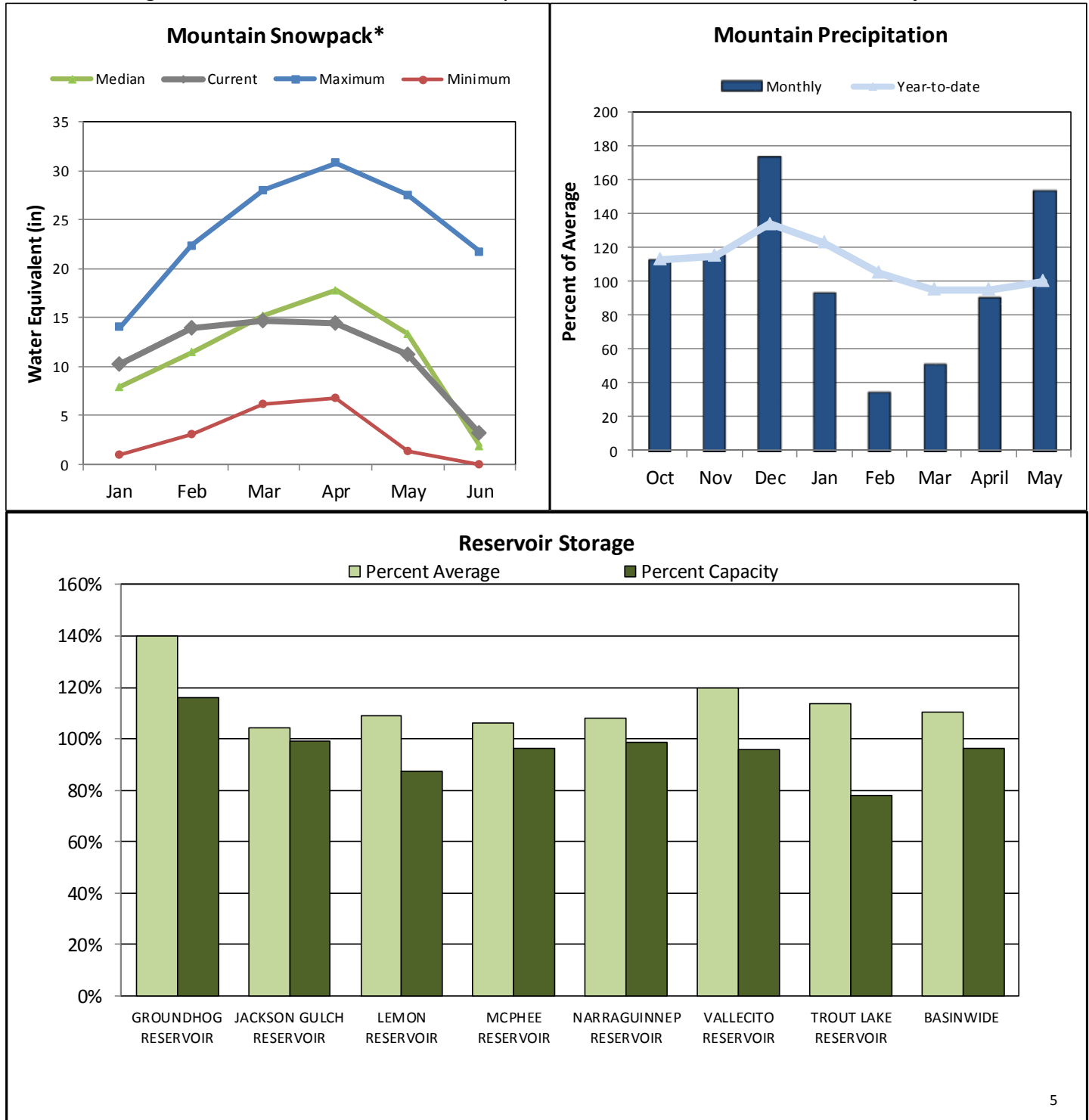


Please refer to the sections at the end of this report for further explanation concerning these graphs.

SAN MIGUEL, DOLORES, ANIMAS, AND SAN JUAN RIVER BASINS

June 1, 2016

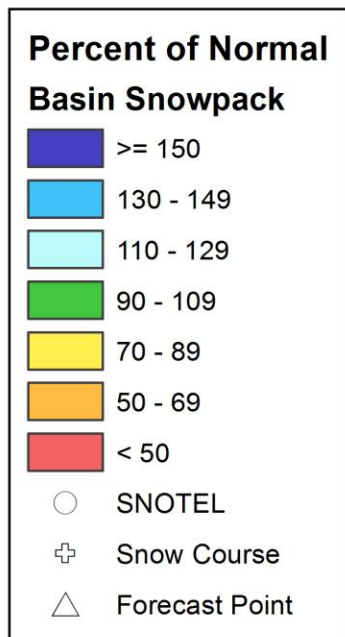
Snowpack in the combined southwest river basins is above normal at 171% of median. Precipitation for May was 154% of average which brings water year-to-date precipitation to 100% of average. Reservoir storage at the end of May was 110% of average compared to 89% last year. Current streamflow forecasts range from 105% of average for the inflows to Cone and Gurley Reservoirs to 69% for the inflow to Navajo Reservoir.



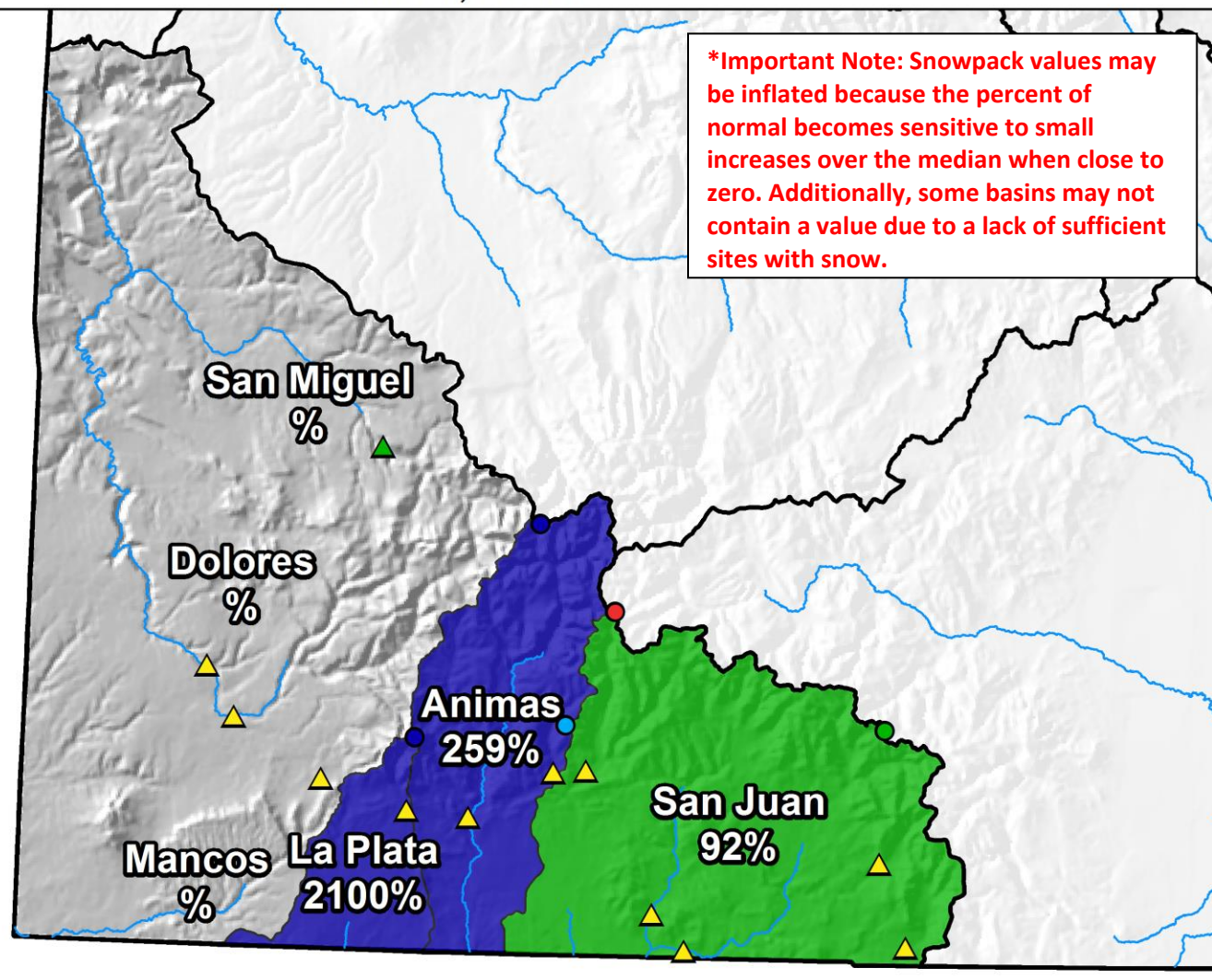
San Miguel, Dolores, Animas, and San Juan River Basins

Snowpack and Streamflow Forecasts

June 1, 2016



***Important Note:** Snowpack values may be inflated because the percent of normal becomes sensitive to small increases over the median when close to zero. Additionally, some basins may not contain a value due to a lack of sufficient sites with snow.



0 10 20 40 60 80 Miles



United States Department of Agriculture

Natural Resources Conservation Service

San Miguel-Dolores-Animas-San Juan River Basins Streamflow Forecasts - June 1, 2016

 Forecast Exceedance Probabilities for Risk Assessment
 Chance that actual volume will exceed forecast

SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	Forecast Period	90% (KAF)	70% (KAF)	50% (KAF)	% Avg	30% (KAF)	10% (KAF)	30yr Avg (KAF)
Dolores R at Dolores	APR-JUL	187	200	210	86%	220	235	245
	JUN-JUL	55	68	78	85%	88	105	92
McPhee Reservoir Inflow	APR-JUL	196	205	215	73%	225	235	295
	JUN-JUL	51	62	70	72%	78	92	97
San Miguel R nr Placerville	APR-JUL	95	110	122	95%	135	155	128
	JUN-JUL	57	72	84	112%	97	117	75
Cone Reservoir Inlet	JUN-JUL	0.74	1.05	1.3	105%	1.57	2	1.24
Gurley Reservoir Inlet	JUN-JUL	3.3	4.7	5.9	105%	7.1	9.2	5.6
Lilylands Reservoir Inlet	JUN-JUL	0.29	0.54	0.75	103%	1	1.43	0.73
Rio Blanco at Blanco Diversion ²	APR-JUL	34	38	41	76%	44	51	54
	JUN-JUL	9.1	13.1	16.3	71%	19.8	26	23
Navajo R at Oso Diversion ²	APR-JUL	40	45	49	75%	53	61	65
	JUN-JUL	15.6	21	25	83%	29	37	30
San Juan R nr Carracas ²	APR-JUL	240	260	275	72%	290	315	380
	JUN-JUL	69	88	103	65%	119	144	158
Piedra R nr Arboles	APR-JUL	143	151	158	75%	165	175	210
	JUN-JUL	37	45	52	70%	59	69	74
Vallecito Reservoir Inflow	APR-JUL	142	151	157	81%	163	172	194
	JUN-JUL	57	66	72	73%	78	87	99
Navajo Reservoir Inflow ²	APR-JUL	450	485	510	69%	535	580	735
	JUN-JUL	160	195	220	76%	245	290	290
Animas R at Durango	APR-JUL	315	335	345	83%	360	380	415
	JUN-JUL	165	183	195	89%	210	230	220
Lemon Reservoir Inflow	APR-JUL	34	38	41	75%	44	49	55
	JUN-JUL	15.5	19.2	22	81%	25	30	27
La Plata R at Hesperus	APR-JUL	15.1	16.2	17.1	74%	18	19.4	23
	JUN-JUL	5.4	6.5	7.4	87%	8.3	9.7	8.5
Mancos R nr Mancos ²	APR-JUL	23	25	27	87%	29	32	31
	JUN-JUL	4	6	7.7	74%	9.6	12.7	10.4

1) 90% and 10% exceedance probabilities are actually 95% and 5%

2) Forecasts are for unimpaired flows. Actual flow will be dependent on management of upstream reservoirs and diversions

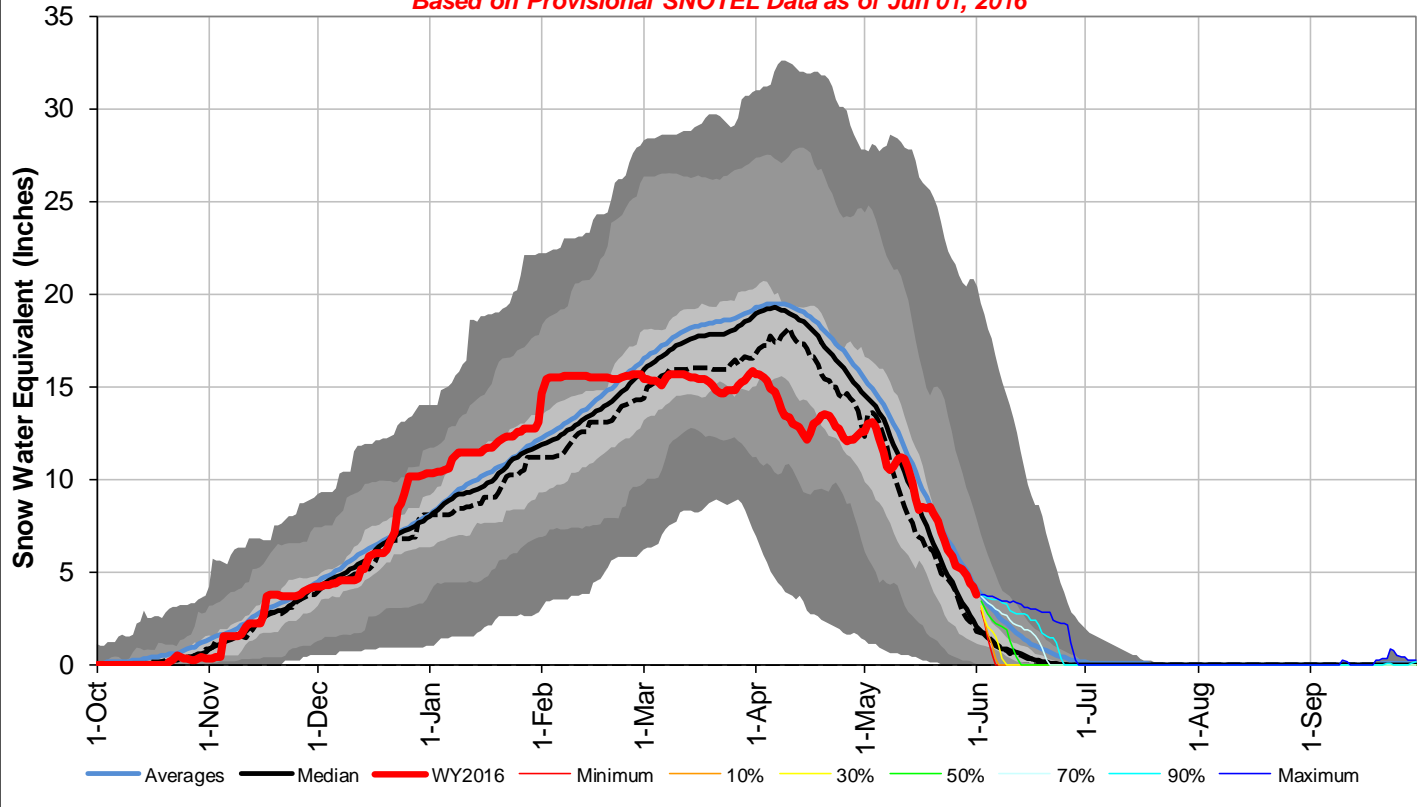
3) Median value used in place of average

Reservoir Storage End of May, 2016	Current (KAF)	Last Year (KAF)	Average (KAF)	Capacity (KAF)
Groundhog Reservoir	25.5	23.7	18.2	22.0
Jackson Gulch Reservoir	9.9	8.7	9.5	10.0
Lemon Reservoir	35.0	34.8	32.1	40.0
McPhee Reservoir	366.5	264.8	344.7	381.0
Narraguinnep Reservoir	18.7	12.5	17.3	19.0
Trout Lake Reservoir	2.5	1.4	2.2	3.2
Vallecito Reservoir	120.6	119.9	100.7	126.0
Basin-wide Total	578.7	465.8	524.7	601.2
# of reservoirs	7	7	7	7

Watershed Snowpack Analysis June 1, 2016	# of Sites	% Median	Last Year % Median
ANIMAS RIVER BASIN	9	259%	379%
DOLORES RIVER BASIN	5		
SAN MIGUEL RIVER BASIN	3		
SAN JUAN RIVER BASIN	3	92%	71%
SAN MIGUEL-DOLORES-ANIMAS-SAN JUAN RIVER BASINS	19	171%	207%

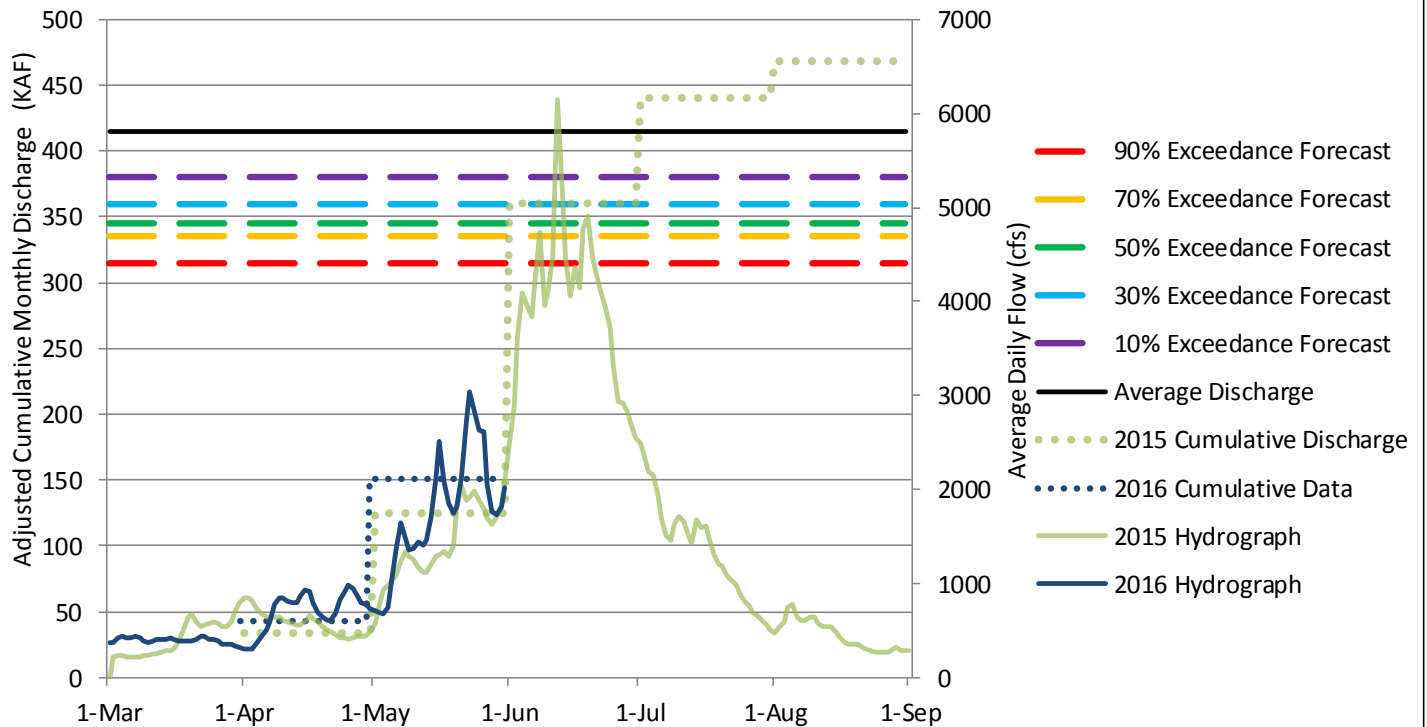
San Miguel, Dolores, Animas and San Juan River Basin with Non-Exceedence Projections

Based on Provisional SNOTEL Data as of Jun 01, 2016



Animas River at Durango, CO

Daily and Cumulative Discharge Compared to Current Streamflow Forecasts (Apr - Jul)



Please refer to the sections at the end of this report for further explanation concerning these graphs.

How to Read Non-Exceedance Projections Graphs

The graphs show snow water equivalent (SWE) projections (in inches) for the October 1 through September 30 water year. Basin “observed” SWE values are computed using SNOTEL sites which are characteristic of the snowpack of the particular basin. The SWE observations at these sites are averaged and normalized to produce these basin snowpack graphs. This new graph format uses non-exceedance projections.

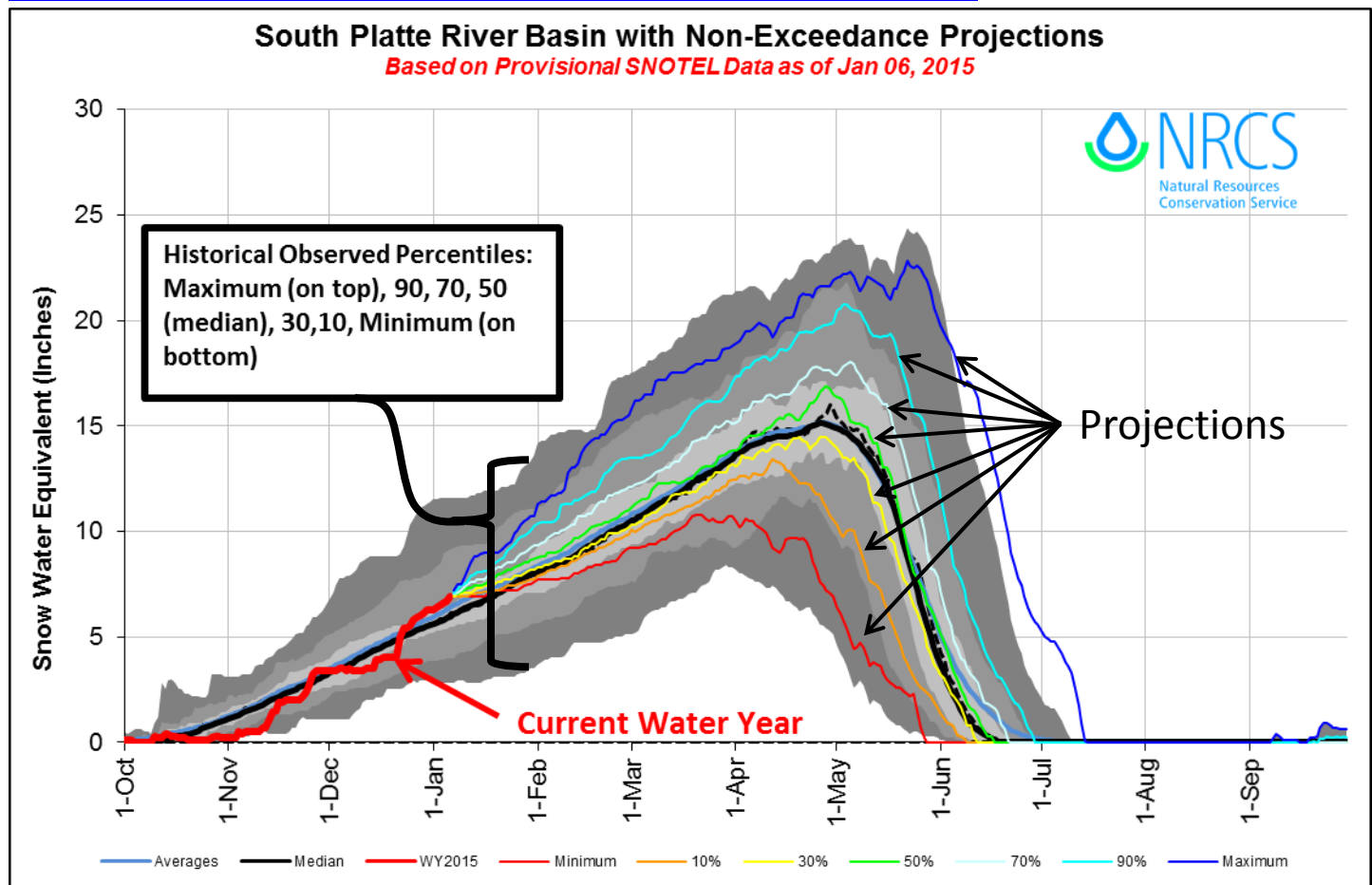
Current water year is represented by the heavy red line terminating on the last day the graphic was updated.

Historical observed percentile range is shown as a gray background area on the graph. Shades of gray indicate maximum, 90 percentile, 70 percentile, 50 percentile (solid black line), 30 percentile, 10 percentile, and minimum for the period of record.

Projections for maximum, 90 percent, 70 percent, 50 percent (most probabilistic snowpack projection, based on median), 30 percent, 10 percent, and minimum exceedances are projected forward from the end of the current line as different colored lines.

For more detailed information on these graphs visit:

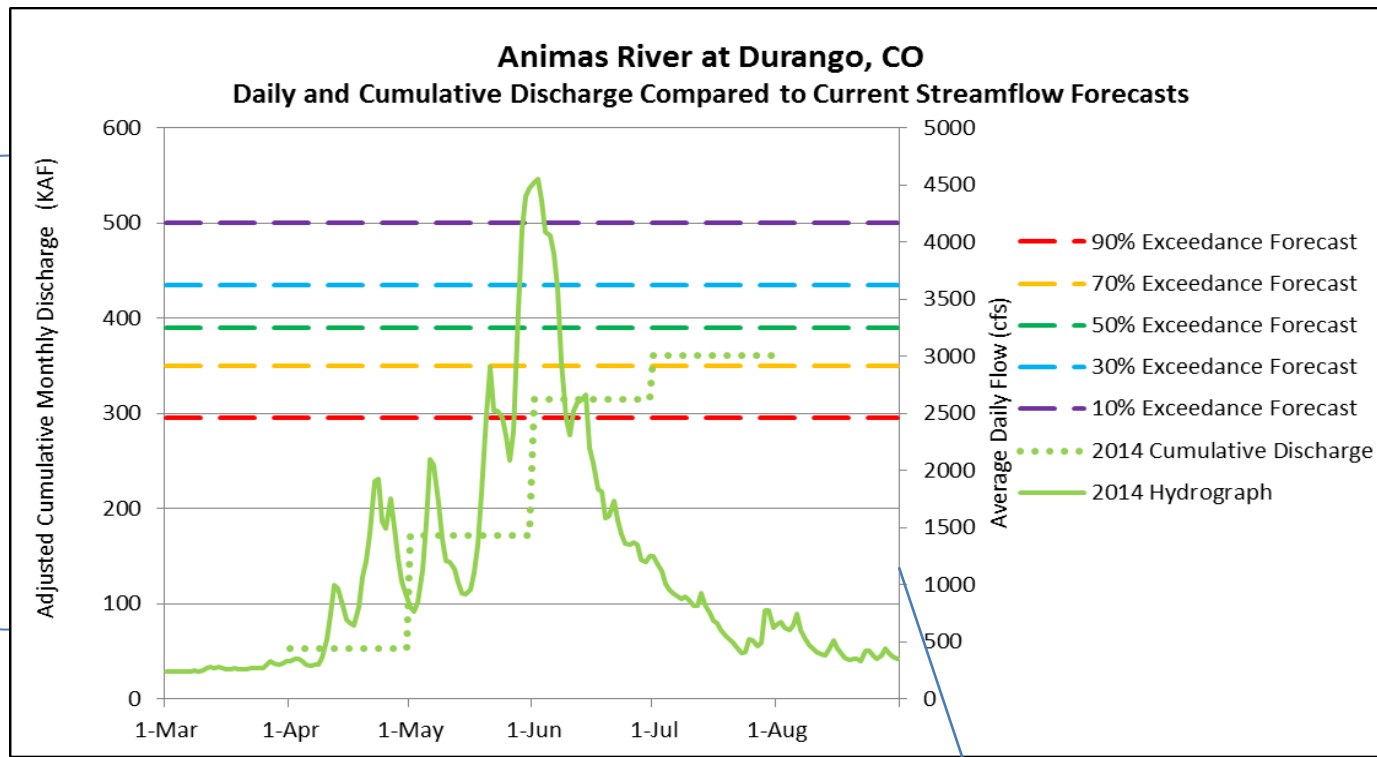
http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_062291.pdf



Explanation of Flow Comparison Charts

The flow comparison charts were developed to provide a quick comparison between the previous years' observed hydrograph, cumulative seasonal discharge, the current streamflow forecasts, and the current years' observed discharge (both hydrograph and cumulative discharge, as the season progresses). Forecast points for these products were generally chosen to be lower in the basin to best represent the basin-wide streamflow response for the season; the true degree of representativeness will vary between basins. When making comparisons of how the shape of the hydrograph relates to the monthly (and seasonal) cumulative discharges it is important to note that the hydrograph represents observed daily flows at the forecast point while the cumulative values may be adjusted for changes in reservoir storage and diversions to best represent what would be "natural flows" if these impoundments and diversions did not exist. This product can provide additional guidance regarding how to most wisely utilize the five exceedance forecasts based on past observations, current trends, and future uncertainty for a wide variety of purposes and water users.

The left y-axis represents values of adjusted cumulative discharge (KAF). This axis is to be used for comparing the current and previous years to the current five volumetric seasonal exceedance forecasts. This graphic only displays the previous years data but data for the current water year will be added as the season progresses.



The legend displays the symbology and color schemes for the various parameters represented. Exceedance forecasts represent total cumulative discharge for the April through July time period with the exception of the Rio Grande at Wagon Wheel Gap (Apr-Sep).

The right y-axis represents observed daily average discharge at the forecast point of interest. This graphic only displays the previous years data but data for the current water year will be added as the Season progresses.

How Forecasts Are Made

For more water supply and resource management information, contact:

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Denver, CO 80225-0426

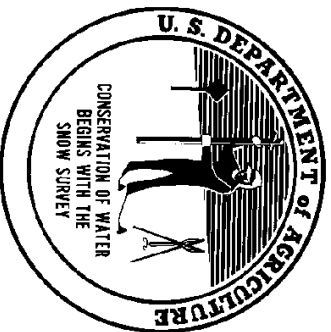
Phone (720) 544-2852

Website: <http://www.nrcs.usda.gov/wps/portal/nrcs/main/co/snow/>

Most of the annual streamflow in the western United States originates as snowfall that has accumulated in the mountains during the winter and early spring. As the snowpack accumulates, hydrologists estimate the runoff that will occur when it melts. Measurements of snow water equivalent at selected manual snow courses and automated SNOTEL sites, along with precipitation, antecedent streamflow, and indices of the El Niño / Southern Oscillation are used in computerized statistical and simulation models to prepare runoff forecasts. Unless otherwise specified, all forecasts are for flows that would occur naturally without any upstream influences.

Forecasts of any kind, of course, are not perfect. Streamflow forecast uncertainty arises from three primary sources: (1) uncertain knowledge of future weather conditions, (2) uncertainty in the forecasting procedure, and (3) errors in the data. The forecast, therefore, must be interpreted not as a single value but rather as a range of values with specific probabilities of occurrence. The middle of the range is expressed by the 50% exceedance probability forecast, for which there is a 50% chance that the actual flow will be above, and a 50% chance that the actual flow will be below, this value. To describe the expected range around this 50% value, four other forecasts are provided, two smaller values (90% and 70% exceedance probability) and two larger values (30%, and 10% exceedance probability). For example, there is a 90% chance that the actual flow will be more than the 90% exceedance probability forecast. The others can be interpreted similarly.

The wider the spread among these values, the more uncertain the forecast. As the season progresses, forecasts become more accurate, primarily because a greater portion of the future weather conditions become known; this is reflected by a narrowing of the range around the 50% exceedance probability forecast. Users should take this uncertainty into consideration when making operational decisions by selecting forecasts corresponding to the level of risk they are willing to assume about the amount of water to be expected. If users anticipate receiving a lesser supply of water, or if they wish to increase their chances of having an adequate supply of water for their operations, they may want to base their decisions on the 90% or 70% exceedance probability forecasts, or something in between. On the other hand, if users are concerned about receiving too much water (for example, threat of flooding), they may want to base their decisions on the 30% or 10% exceedance probability forecasts, or something in between. Regardless of the forecast value users choose for operations, they should be prepared to deal with either more or less water. (Users should remember that even if the 90% exceedance probability forecast is used, there is still a 10% chance of receiving less than this amount.) By using the exceedance probability information, users can easily determine the chances of receiving more or less water.



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In addition to the water supply outlook reports, water supply forecast information for the Western United States is available from the Natural Resources Conservation Service and the National Weather Service monthly, January through June. The information may be obtained from the Natural Resources Conservation Service web page at <http://www.wcc.nrcs.usda.gov/wsf/westwide.html>

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Water Supply Outlook Report

Natural Resources Conservation Service
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